An analysis of Contemporary Urban Public Open Space Design and Construction in China: Progresses and Problems

Hong Tang

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Heriot-Watt University Edinburgh
Department of Landscape Architecture
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Abstract

The urban square as a new spatial form has become a main component of urban public open space with large numbers of them constructed during and immediately following the 1990s. Chinese scholars describe this phenomenon as 'urban square craze' and provide critical suggestions focusing on the problems of design and utilisation, which mainly include the excessive pursuit of image enhancement, over-formalised patterns, under-utilisation and the loss of local distinctiveness. Do these negative aspects indicate the inappropriateness of urban square development in contemporary China? If not, what should be continued and what should be adjusted in future development?

To answer these questions, this thesis sets out from the perspective that the urban square is a foreign spatial form and asks, "what are the positive and negative aspects of the application of western design elements in contemporary urban public space development in China?" It explores the general issues and the problems existing in urban square design and construction and identifies the changes and influences urban square construction has brought into social development and social life; it identifies comprehensive recommendations for further research and practice which focus chiefly on issues of scale and daily use.

A history review and literature review are employed to explore the hypothesis that imitation of western design elements characterises contemporary public space development. A range of nationwide urban square projects have been drawn on and surveys of citizens and interviews with designers and managers used, to address a secondary hypothesis that negative aspects dominate urban square design.

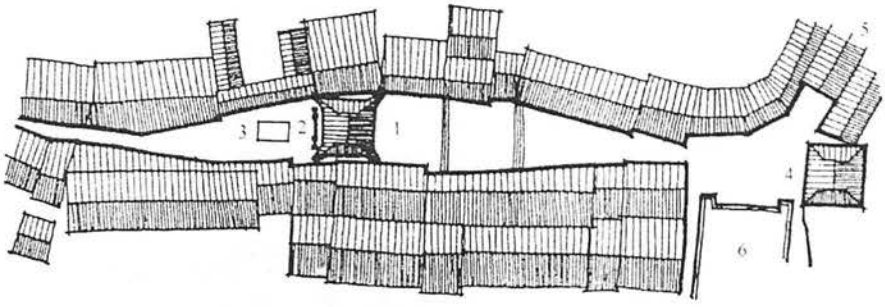
Chapter 1 Research Background and Introduction

1.0 Background to the research

Urban public open space epitomises urban life and urban development, illustrates the history of development, the honour of the city's past, the taste at a certain moment and the techniques available at that time, even becomes the symbol of a city. From its open spaces, anybody can learn about the city. The visible examples can be discovered throughout Europe, such as piazzas in Italy, green parks in Britain and the wide boulevards and avenues of France.

In China, public space has developed rapidly in recent years. Urban public green space increased from 0.149 million hectares in 1984 (Ye 1986: 2) to 0.466 million hectares in 1998 (2000: 277), parks increased from 946 in 1984 (Ye 1986: 2) to 3990 in 1998 (2000: 277). Inspired by the success of urban space and urban life in the west, the urban square - a new urban spatial form - has been taken as the preferred form of public open space development in China in recent years.

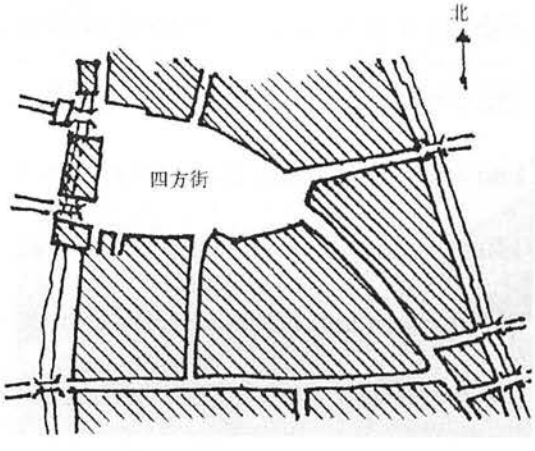
The so-called urban square is a new urban spatial form as it was used very rarely in the developing history of Chinese cities. Luocheng Square (figure 1.01) is a boat-shaped place sited in a small town in Sichuan Province, a gateway structure gives it a very Chinese flavour and an open-air theatre building dominant in the middle of the square decisively pronounces it is a public gathering place. Another (figure 1.02) in Lijiang, Yunan Province, has an interesting name 'Square Street', its meaning can be considered as indicating an organic open space – widened street – the original form of



1. The open-air theatre
2. The stone gateway
3. The fire well
4. The temple
5. The overpass building
6. The theatre

Figure 1.01 Luocheng Central Square, Sichuan
(Source: Bai 2002:166)

Figure 1.02 Lijiang Square Street Plaza, Yunnan
(Source: Bai 2002: 140)



an urban square. However, these are the only two considered as typical plazas through Chinese history of urban development and mentioned most often by Chinese scholars (Sun et al. 1998, Bai 2002 & Zhang 2002). Although there were more open spaces that had been called urban squares since New China was founded, most of them were only used for mass rallies.

The construction of the urban square has become a main component of Chinese public space development in terms of scale and numbers. It has been called an "urban square craze". Various urban squares of different names and sizes, numbering more than a thousand, have appeared in most metropolises, cities, towns or counties throughout the country and become important showcases of the achievements of each local authority (Liu 2000: 10). However, although some squares have proved to be very popular, as activity focuses (Lynch 1981: 443), some are neither as busy nor as popular with people and are far from being "microcosms of urban life" (Webb 1990: 9) in harmony with their surroundings.

Kong-jian Yu and Qing-ping Ji (Yu & Ji 2000: 33) comment that some squares are designed as places of grandeur, confusing scale with beauty and value. Xiu-chen Liu (Liu 2001: 42) argues that the many squares that have been praised as "bright pearls", in fact lack vitality, and follow a similar model: what you look down at are pavements or lawns; what you look at are fountains; what you look up are sculptures, steps and flagpoles and what you look at along the axes are the city, town or county halls. Chinese scholars share a common viewpoint that this often repeated pattern, copying western models, ignoring the local context and character and suiting appreciation but not utilisation, are universal problems in contemporary urban square design and construction (Li *et al.*, 2000: 20-23, Jin *et al.*, 2000: 16-18 & Su 2001: 54-57).

Such construction does not result in improving the quality of people's lives and enriching the image of the city, an intention most often expressed by government and designers. The public overwhelmingly does not appreciate or even use these squares,

giving risen to the question: where did they come from and for whom were they built? Why do these phenomena emerge?

Many scholars criticise the trend of copying western style. Wu-zhong Zhou argues that contemporary landscape architecture in China has developed from classical to modern and from restoring ancient form to worshipping western style, but has not formed its own school (Zhou 2001). Or rather, there is increasing interest in quantity but not in quality. As many scholars point out, are the current problems because of this copying of a western model and, if so, what is the difference between copying and application of design principles?

1.1 Main question and hypotheses

This thesis asks, **what are the positive and negative aspects of the application of western design elements in contemporary urban public open space development in China?**

It argues that the characteristics of contemporary public space development influence urban developments and people's lives. It focuses on urban squares and outlines the problems existing in, and the reasons behind, design and construction and proposes an analysis of evaluation and recommendation for future research and practice. An historical review and a literature review are employed to lay down a base for exploring the extent of the first hypothesis: the imitation of a western design model characterises contemporary public space development. A range of nationwide urban square projects are drawn on to explore how western design elements have been used

and hence provide outputs of application of western design elements. Surveys of citizens and interviews with designers and managers are used to formulate the second hypothesis that positive and negative aspects exist at the same time.

Regarding the hypothesis in a philosophical way, it is reasonable that negative aspects predominate over positive aspects, as everything has two sides and all existing things have conflicting reasons. To approach the answer this thesis unfolds under four objectives.

The first is a case study of urban square projects, which as the sources of first hand information illustrate the issues existing in square design and construction.

The second is an investigation of the intentions of designers and developers, as they are the implementers in making public space that meets community needs. If there were common ground in design and utilisation of public space, then contemporary development would be positive more than negative and lead to a betterment of city life.

The third is a close look at the western theory and practice in urban public space construction to understand the evolution of public space and the experience of dealing with the changing needs. This is applied to evaluate practice in two aspects, learning from the west and public space construction.

The fourth is an historical analysis of the impacts that have caused the problems related to contemporary square design and construction and, hence, provides the basis for the recommendations and conclusions.

1.2 Justification for the research

1.2.1 The importance of this study

In contemporary China, social development and social life are experiencing huge changes. They involve new contradictions in tandem with the transformations of policies that are more concerned with economic performance than with political purity; the economy was transferred from being centrally planned to being free market dominated and industrialised productivity dominated. Developing an economy and improving the quality of people's lives has become the key task of the country; industrialisation and urbanisation has become the more obvious manifestations of national development; the opening of minds has become the way of thinking advocated widely. Sustainability of development, unified global economy and cross-cultural pressures are the challenges the country has to confront in various aspects of social life.

In an urban context, economic development provides opportunities for improving people's lives in terms of food, clothes and living conditions. Meanwhile, industrialisation and urbanisation have resulted in the reduction of urban environmental quality, bringing pollution, noise, hard concrete surroundings, traffic jams and the 'heat-island' effect, now universal phenomena in most Chinese cities.

High-rising buildings and overpass bridges have changed the traditional city forms and also swept away the memory of cities, the traditional city forms.

On the other hand, attendant upon the development of the economy and the rising living standards of the people, more and more Chinese people are interested in outdoor activity and travelling. When a two-day-off working timetable was implemented in May 1992, many local newspapers sparked off an animated discussion about "where are we to go in our leisure time" (Qingdao Evening News 28th April 1992)?

To solve the environmental problem and meet the needs of social development, increasing green and outdoor activity spaces has become the focus of environmental construction. Open space projects have been put on the list of the annual plan of local authorities as guaranteed projects in finance and implementation, unlike earlier plans, in which financial support used to be uncertain even if they had been included in administration plans (Jin-guang Li, general director of Qingdao, interview 18th April 2000).

The national authority promulgated a series of related policy and decrees from the Environment Protection Law in 1989, the Urban Planning Law in 1990, and the Urban Greenery Regulation in 1992, to the Standard of Garden City in 1996. Meanwhile, national authorities began to send scholars, managers and designers to study in or visit other countries in order to see how other parts of the world have been successful in urban development since the mid 1980s (Xue-shan Tang Professor of Beijing Forestry University, interview on phone on 10 March 2001). These measures

effectively stimulated and protected environmental construction. The last part of the twentieth century has come to be considered universally as the most prolific period in landscape architecture and green space construction in China (Liu 1995: 2; Liu 1999: 3).

However, in landscape architecture and green space construction, increase in quality is as important as any increase in quantity. Yet increased quality cannot be created or ensured by laws or regulations as the quality depends on the understanding of the changeable community needs, which is an endless process and which is lacking in contemporary research work.

1.2.2 Previous research

Although public spaces have increased rapidly in numbers, practice so far does not have a corresponding theoretical base to refer to when the need of public space arises. This lack is represented in unimaginative square design and construction. Even in recent research, it is difficult to find out behavioural and psychological analysis of parks, squares or residential gardens; in basic theory research there is a big gap, such as the definition of square, its characteristic of space and basic attributes, or the differences between small towns and urban parks. There is lack of systematic analysis or illustration of the evolution, the utilisation, the experience and lessons of public space in the world, or the comparison of living habits and needs between China and the west. Many essays criticise the phenomenon of copying western models but give little analysis of the cause, either from history or from current reality, nor the solutions. 'A human dimension' is often cited in the literature, but an overview of the

texts on public space designs reveals a predominance of designers' or developers' ideas or comments and rarely includes users' comments or the results of surveys. Moreover, photographs published in related journals or books badly lack the human presence. This phenomenon raises a suspicion that Ken Worpole (2000:12) identifies: he questions whether a similar trend once took place in Europe years ago that "it seemed to shift the focus of attention from the use and enjoyment of buildings and settings to a preoccupation with the visual aesthetic".

1.2.3 About findings

This research overall attempts to offer a comprehensive theoretical perspective for the study of contemporary public space development. This is achieved through studying issues existing in urban square design and construction, the relevant social contexts and western theory and experiences and testing the significance and effect on further development in general. The study adopts a multi-disciplinary approach in order to address thoroughly the variety of subjects mentioned above, which include environmental psychology, urban design, historical studies, cultural and symbolism studies, and their implications in the built environment. As the urban square is a new spatial form with an intensive western influence and which has been developed in large numbers in recent years, the research of urban squares is significant on both theoretical and practical grounds.

The main contribution is focused on **the creation of urban public open space for Chinese citizens**. The expected outcome of the study is **the provision of a**

theoretical perspective that is needed by designers and decision makers for the elaboration of indigenous types of environmental development.

In detail, the thesis first provides a basis of its historical research of public space by exploring the social context and the related factor of western influence, which would be equally significant to other aspects of public space or urban development, as western influence in China is a universal phenomenon in contemporary urban development. Secondly, the thesis offers a clarification of the definition of the urban square and its spatial characteristics, basic attributes and its difference from the urban park, to enrich basic theory and to avoid confusion in practice. Thirdly, the thesis identifies the aspects which should be considered in square design, based on the analysis of the perceptions of citizens and designers. This should also be useful in the design and assessment of other parts of public spaces. Then, finally, the thesis offers successful analysis of square design and evolution in the west, which would be helpful to understanding the results of western square construction and development of square construction in China.

1.3 The methodology of the research

The research methods chosen for this study are mostly qualitative in response to the complex and subjective nature of the issues and areas. The significance of public space must genuinely embody a focus on utilisation rather than on construction and it is enriched or transferred by time and users. Public space refers to different aspects of social life and groups. Therefore, to approach the initial ideas stated above this

research employs case studies, literature research, historical reviews and observation, interviews and surveys.

Many of the historical, practical and philosophical issues applicable to the meaning of urban square are found in Chinese and English literature. Although theoretical work about public space in China is in the initial stages compared to its counterpart in the west, interviews with designers and producers, a survey of citizens' attitudes and spending the time to record the actual utilisation of spaces have proved effective paths to formulate a theoretical basis upon which to build this research.

The case study approach provides support for the main point of the thesis from a practical angle. It takes a close look at urban square designs, drawing on cases that cover much of the country and analysing the similarity in designs of different categories. Hence it illuminates evidence for demonstrating the performance and related issues in square design. The cases drawn on in the thesis are important in their position in each city, most of them have been published in books or journals and the author has visited most of them. This approach, combined with a literature research in chapter 2, is used to discuss the experience and idea of public space in the west to support the recommendations offered in the late part of the thesis.

The historical review in the thesis explores the coherence of public space development in the second half of the twentieth century. Unlike most researchers (Wang Jiu-yuan 1992, Liu Shao-zong 1995 & Liu Zong-hua 1999) who base their findings on scale and empirically different aspects, it looks for clues for the changes of the principles, the compositions and the designs of public spaces under different

political and economic conditions. It refers to previous historical research and an analysis of publications. The review is also employed for dealing with the reasons behind the application of western design elements in China. It is supported by published analyses and statistics.

The interviews with designers and managers are helpful to understand their design intention and their management problems. Some interviewees were involved in a certain project analysed in a case study and were met by the writer on sites or at other occasions, such as at conferences. The ideas they gave, although related to a certain project, also offer general insights into public space design.

The observations, interviews and surveys attempted to elicit users' preferences for public space from their behaviour in it and responses to a questionnaire based on Personal Construct Psychology. For example, many foreign designers felt that it was not acceptable that users were prohibited from walking on the lawns, but a survey of perception of evergreen lawns shows that citizens deemed this acceptable for maintenance purposes because fresh grass is better than bare soil and yellowed grass in winter. Observation and survey is thus an effective method to understand public life and local custom to see where this diverges from the preferences of the professions and this serves to underline the seriousness of the absence of such analysis in public space design at present.

1.4 The structure of the research

This thesis presents its exploration in six chapters. As the introduction of the whole thesis, Chapter One explains the background of this research, the core focus of the thesis and its organisation.

Chapter 2 builds a theoretical foundation based on a literature search for identifying the research issues extant in public space construction. Section 2.1 reviews the relevant literatures, which focus on contemporary urban square and urban public space development in China to derive the questions and research issues, which have not been answered in previous research and are worth paying attention to. Section 2.2 of this chapter outlines basic attributes of the 'square' in terms of definition, functions, scales, forms and materials, based on reviewing the works of previous researchers in the west and who are involved in the related disciplines of landscape architecture, urban design and psychological research. The last part of this subsection reviews successful urban squares created respectively in ancient and modern times to discover, the secrets to success. It illustrates the importance of basic attributes and the varieties of success. Section 2.4 clarifies the definition of an urban square and induces fundamental attributes of urban squares and hence provides criteria for evaluation in later chapters.

Chapter 3 provides a critical approach towards exploring urban square design and construction with the aid of the main research methods: case studies and interviews with designers and managers. In the introduction section, the chapter justifies the case study methodology, and its linking with other findings of the research. For the convenience of analysis, based on the position occupied and functions played in urban life, the thesis classifies squares into three typologies: 'assembly and dispersal hub',

'thematic site' and 'leisure place'. These then structure the three main sections of this chapter. The projects are drawn from the three typologies to compare their layouts and designs to discover the models that most designs follow. It explains the intentions of designers and records how the spaces are used, hence illustrating parities or disparities between design and utilisation.

In order to explore the evidence unearthed by the case studies, Chapter 4 introduces and explains interviews and a survey of Chinese citizens to show which their perceptions of urban open squares.

Chapter 5 presents patterns of results and analyse them for their relevance to the main questions and hypotheses. The first part of this chapter summarises the general findings of the case studies about how western design approaches have been applied. Based on the general findings, it distinguishes the strengths and weaknesses and the problems in urban square designs in the second part. Focused on the problems, it explores the reasons behind then in order to address essence of the problems.

Chapter 6 put an emphasis on exploring the criteria of 'amenity', 'social issues' and 'characteristics' for evaluating urban square construction against a social background. The findings of these chapters as a whole are further discussed and combined with the opinions of Chinese scholars to make a contribution to the final conclusion in Chapter 7.

Based on an analysis of the collected data from previous chapters, Chapter 7 identifies the characteristic of contemporary urban public open space construction from the

angle that imitation or application is dominant in urban square designs and asks whether there are only negative aspects in urban squares designs. It distinguishes the positive and negative aspects in social development background to provide comprehensive understandings of modern urban public open space development. The final part of this chapter and also the final part of this thesis provides recommendations to designers, researchers and policy makers for improving further urban square design and construction.

1.5 Definitions

1.5.1 Urban public open space

For the purposes of this thesis, 'urban' refers to the area in a city or on its edge. All the case studies chosen are inner city. 'Public' includes all places accessible freely and legally to the public. 'Open' indicates all outdoor spaces open to the sky with natural climate. 'Space' refers to the places in three dimensions for free or open utilisation and reduced urban qualities of noise, traffic, pollution and fast movement.

Such 'urban public open space' is defined as any outdoor places accessible for public life and "associated with pleasure, with recreation, with human encounters and communal celebrations" (Heckscher 1977: 1) in the urban area. It includes square, park, waterfront and street nodes; it excludes the traffic-road network and those places only serving certain groups, such as club gardens, roof gardens, campus outdoor spaces and office yards.

1.5.2 'Public green space' and 'urban public open space'

'Urban public open space' is rarely used as a terminology in urban land division and urban space study in China. Except for several translated works such as "Life between Buildings" by Jan Gehl (He 1992) and People Place (Yu *et al.* 2001), it is only mentioned by a few Chinese scholars; for example, Jian-ning Zhu (1999: 75) suggests that, at present in urban development, studies tend to "rather discuss urban public space than discuss urban park and green field".

'Public green space' is the alternative terminology that has been used for many years in China. The ratio of green space to built environment is a rigid target in urban planning and development. 'Public green space' refers to landscape architecture and green fields with certain equipment and components that play a beautification function, supported by municipal investment for people's recreation, visiting, playing games, and entertainment, sports and scientific activity. It includes parks, children parks, traditional gardens, strip green fields along rivers, lake, seashore, road, and (ancient) city walls and mini-parks. This concept of green space was introduced into China from the Pre-Soviet Union Russia in the 1950s. As the terminology has been widely accepted and acquired across each professional level, planning, design and management departments, it has been continually employed (Yang 1995: 118).

The most immediate differences between urban public green space and urban public open space is that green space excludes the square, because urban comprehensive planning categorises the square into the range of urban road network land-use, indicating that the primary prerequisite to being a public green space is that it must be

green, or rather be with rich vegetation. To be public and to be welcomed by the public is the primary prerequisite of urban public open space. Thus differences of emphasis exist between the two spatial and land use categorisations.

Although this thesis chooses to limit its discussions to the urban public open space, it does not mean that greenery is not important in public space development, only that public space focuses on serving the public, and therefore is more suitable to meeting social demands; and greenery is just one of social demands. Public space is more close to the essence of contemporary urban development than public green space, where greenery is the main measure. This wider scope and content make the study of public open space more significant to meet the change of urban construction and urban life.

1.5.3 Western design elements

This thesis does not systemically reiterate point, line, plane, volume and the combination thereof, those basic design elements, or structured factors, building, plant, water, path, sculpture and monument, or systematically analyse design elements in a western or Chinese way. Western design elements in the thesis refer to those methods or factors that have been widely used in the west through the western history and differ from the traditional approach of park and garden design in China and the picturesque English landscape style, but are widely used in public open space in China in recent years. There is no such rigid classification of design elements in the research. The urban square as a spatial form is a western design element in urban design and geometric and axial patterns, lawns, fountains and sculptures can be

considered as western design elements in urban square designs. This brief explanation clarifies meaning of 'west' and 'western' and the differences between western and Chinese design elements and introduces why sculpture, fountain and lawn are considered as the main western design elements in the thesis.

'Western' in Chinese has two main meanings (Xinhua Dictionary 1992: 495). One means the orientation as opposed to 'east', and another is used to describe the styles and methods initially originated in European countries, for examples, 'formal suits' in Chinese is 'western suits' and pizzas, chips and sandwiches are called 'western food' as a general designation. 'The west' in Chinese generally indicates western European countries and those countries which have similarly-rooted culture, which include the United State and Canada.

Many contributors provide strong evidence, using design elements and methods, of the comparison between the western style and Chinese style. The literature includes, "Foreign art of garden design" by Zhi-hua Cheng (2001), "Chinese Classical Landscape Architecture History" by Wei-han Zhou (1999), "The Aesthetics of Chinese Landscape Architecture" by Xue-zhi Jin (2000), "The Characteristic of Cohesion-in Chinese Classical Gardens and that of Extroversion-in Western Classical Gardens" by Ning-jiang Wu (1989) and "In Search of Paradise – A Comparative Study on Chinese and Western Classical Garden Arts" by Wu-zhong Zhou (2001).

Chinese traditional park and garden design is one of the three 'schools' in the world (Western school, Chinese traditional school and Western Asian school) (Tong 1983). It is different from the others in terms of the patterns, forms, thoughts and emotions it

expresses. Although there were cross-influences in the eighteenth century between the west and China, the influences did not become mainstream in either of the schools and especially in China (Cheng 1999: preface). The traditional style in China kept its position in landscape design and construction up to contemporary times. "Even though things are made by man, it is just as if the Heaven has created them" is always the highest state traditional landscape design can pursue (Cheng 1991: 4). Geometrical and axial symmetry pattern is rarely experienced in traditional Chinese landscape design, although it is the main pattern of structure of Chinese ancient cities (Dong 1989: 187). Water scenery is similarly neither encountered in pure fountain-form, nor in the form of running water controlled by gardeners nor of static water, shaped into geometric pools as in the west. In China, the creation of water scenery prefers the natural style, with a stream flowing through bank-rock or over gravel, or dropping down from some part of the hills or being static in a large feature like a lake or a very small one like a spoon. Man-made rocky-hills Chinese gardens had the similar position to sculpture in European gardens. Lawn and plants, as the outer pelt of the garden, kept to natural shapes, and even those reshaped bonsai plants still expressed a natural beauty and differ totally from the geometric topiary trees or bushes of formal European gardens.

The differences and similarities between western and Chinese schools of classical landscape architecture express varying aspects. The similarities structure the bases of cross-influence and cross-reference, expressed in the aspects, origination, materials, the process of development and the target population served (Zhou 2001: 177-179). The differences are essential to the form of each school; they represent the dissimilarities of philosophy, aesthetics and climate and geography, they also

concretely display the methods and skills of design and construction. The similarities and differences have been inherited as the context of each culture, evolving along with social development and needs, and the surface appearance and form are only a reflection of this.

Sculpture as public art has been used widely in public open space in contemporary China. But in ancient time, sculpture was considered an "insignificant skill attracting little attention from the upper-class" when compared with painting and calligraphy in ancient China... "It is the oldest art and the most important art but had been ignored for a long time" (Liang 2000: 12). According to the introduction of 'Sculpture History in China' (Liang 2000), sculpture masterpieces generally expressed religious themes and were used to furnish the tombs of emperors of ancient China. In contrast with the west, there were some sculptural features, mostly animal features; in Chinese ancient gardens, almost all related to religion or representing security. But sculptures of the human body were not part of the concept of landscape beauty in ancient China. And the position of sculptures in western gardens was similar to the stone-hill in Chinese traditional garden (Zhou: 2001: 155).

The largest ever fountain features in the whole of ancient China were built in Yuanmingyuan in Qing Dynasty (1644-1911). Following the famous manmade landscape that was destroyed in 1860, the sound of fountains had been missing for hundreds of years. For example, in Qingdao, before the 1990s, there was only one small fountain built in 1923 in Zhongshan Park (1997: 14). Ten years since a set of fountains in a large scale was built in Huiquan Square in 1991, there are more than 20 sets of fountains in different scales in this city. The author, as a designer (1989-1999,

in Qingdao) noticed that fountains and sculptures have become topics discussed between clients and designers. Fountains are thus important element in public space design.

The use of lawns was only on a limited scale before 1980s. On one hand, this was because 'planting grass and flowers represented capitalist life style', on the other hand, the economic condition limited urban environment development. In urban open space, unpaved ground was usually bare earth or grasses growing unevenly, such as in The Heaven Temple Park in Beijing, the People's Square in Shanghai and Huiquan Square in Qingdao before their renovation. Up to1993, some scholars, such as Ding-zeng Ai (1993: 4) still wrote articles to advocate a greater role for the use of lawns in greenery-deserted urban landscapes, to reduce dust and improve the atmosphere quality. Thus it can be seen that even in the early 1990s, the use of lawns in public open space was still on a small scale. But coming into the second half of the 1990s, the planting of lawns had been elevated onto an extraordinary scale. For example, in Dalian, between 1994-1997, the annual amount of new planted lawns was 0.7 million m^2, 1 million m^2, 2 million m^2 and 2.8 million m^2 respectively. Lawn became a new design element in urban environment construction.

1.6 The limitations of scope and underlying assumptions

This research of public space focuses on the urban square, as it is the main component of contemporary development and partakes of western influence as it has been considered as the characteristic of contemporary development. Therefore, in terms of time and content, the research is relatively concentrated; or rather it focuses on the

main issues of contemporary square design, the relevant areas such as historic cultural and symbolism studies and involves only the parts which are related to western influence.

China is a country with a vast territory (more than 9.6 million square kilometres) and huge population (more than 130 million people), and has 668 cities with over 37 million residences in 1998 (2000). There is a strong regional disparity through the country from the east to west in terms of economic as well as urban development (Yan *et al.* 2002: 51-52). Although the research covers most parts of the country and chooses study cases from many Chinese cities at different levels, it still provides a perspective of public space in general, but is, necessarily, somewhat selective.

The research is just a part of a body of public space research and is limited by component and time, but it is significant to contemporary development. It provides suggestions and recommendations for environmental development for the country in general.

1.7 Conclusion

This chapter lays the foundations for the thesis. It introduces the research question and hypotheses. Then the research is justified, definitions are presented, the methodology is briefly described and justified, and the structure of the thesis and the limitations of the research are given. On these foundations, the thesis can proceed with a detailed description of the research.

Chapter 2 Literature Review

2.0 Introduction

Urban development in China has a long history. The thinkers and doers of city planning and landscape design in ancient China have left theoretical treasures such as the traditional principles of city planning, "the unified, the regional and the natural", still highly praised today (Zhou 1997: 4). Yet these ideas rarely refer to the urban square.

Available works of literature on the urban square are very limited and mostly appeared in 1990s. Nevertheless, there are plentiful works on urbanism elsewhere in the world, from "The Art of Building Cities" (written in the late 1800s by Camillo Sitte) to "Public Places, Urban Spaces" (published in 2003 by Carmona *et al.*). Some concentrate on theory, some concentrate on practice and all emphasise different topics. Thus Zucker (1966) bases his ideas on the spatial framework, outlines archetypes and chronologically overviews the development of squares in an architectural and aesthetic sense; Moughtin's work (1992) is based on architectural and urban design concepts, he analyses the examples collected from the past and gives details for creating squares. Webb (1990) gives a full picture of the look of squares and the life unfolding in squares through the years, from Siena's ancient Pizza del Campo to New York's modern Rockefeller Plaza, from the hard landscaping of Cecke Budejovice in Czech Republic to the green square beside Lincoln's Inn in London (Webb 1990: 10-15). So these influential contributions should comprise a rich

resource for setting up a theoretical base for research into the 'urban square' but are reviewed selectively and not repeated in every detail.

With the intention of exploring the theoretical foundation of the urban square, this chapter concentrates on its conceptual basis and offers corresponding examples. At first, the chapter sets up the targets and limitations of literature that can best assist this research; it does this by reviewing recent research work and observations contributed by Chinese researchers and scholars. Their works concentrate on two aspects: introducing western theory and practice; and exploring the problems provoked by modern development in China. These sources provide clues that aid people's understanding of urban square and relevant disciplines and they propose measures for assessing contemporary design and construction. Secondly, the chapter throws light on the confusion and implication of western theory and practice and selects insights from previous work around the world to understand the definition, function and form and urban design concepts and elements of the urban square, taking many ideas from literature of 'successful examples' to clarify those basic attributes. This chapter supports an understanding of the character of modern urban square construction in which the positive and negative aspects of the issues exist.

2.1 Research Issues

2.1.1 Theoretical work from Chinese scholars

Chen-yang Su (2001: 54 & 55) deems that the pursuit of a huge scale in urban square construction in recent years is a very serious mistake. Urban squares from 5 or 6 to

more than 10 hectares can be found everywhere, particularly in many smaller cities. He thinks that there is a lack of comprehension on the urban square, this foreign urban spatial form, and that the simplistic notion that bigger is better is promoted, prevails and causes competition between cities. He invokes Kevin Lynch and work to provide suggestions on appropriate size. He wonders whether Tiananmen Square, the biggest one in the world (44 hectares) is the root of universally pursuing huge size. He explains that Tiananmen Square was built under a particular political background and for a particular political demand but does not give further exploration.

Xiu-chen Liu (2001: 42) also criticises how the phenomenon of competition in terms of scale, ostentation and stereotyped plazas has become popular in contemporary construction. He keenly advocates a greener approach to urban squares and believes this is a key way to increase urban public green space.

Xiang Li and co-authors (2000: 22 &23) also deplore those so-called civic squares which are monotonous and void of greenery other than featureless lawns. They suggest that a three-dimensional greenery and vegetation area should be controlled at between 40-60 percent, even to 70 percent of total area in urban square design, in order to embody ecological principles and realise sustainable development.

With regard to greenery, Chen-yang Su (2001: 12) raises a call in favour of the 'ecological appeal' and 'environmental benefit' of urban squares though, as with Xiu-chen Liu, he prefers more trees and less lawn. He believes that an urban square should be an open and accessible space serving a range of users; its function is not exclusively to solve ecological/environmental problems. Greenery should take the

secondary position in urban square design. But about the use of large lawns, many commentators share a common opinion: they offer less significance in terms of visual, utilised effect and cost (per square meter cost average 2 pounds/year for maintenance in China).

Can Jin and co-authors (2000: 16) make similar points. In their account, they mainly focus on the qualities of the enclosure of the spaces. They notice that many urban squares in Chinese cities are enclosed by traffic roads, not buildings, or only enclosed on one or two sides, and point out that users in such urban squares easily feel unsettled in terms of behaviour and psychology. As a result, people shorten the time they spend in such unenclosed forms, reducing the spaces' attractiveness. They perceive in addition a lack of united cohesion in terms of facades and scales of surrounding buildings, even in those urban squares that are enclosed.

Jian-guo Wang (1998) claims that the modern urban square is not only a simple composition of spatial enclosure and visual aesthetics. Its design and construction should combine concepts and methods of planning and architecture with ecology, environmental psychology and behaviour research and fully consider utilisation and maintenance. Based on this position, he describes the principles of urban square design in modern Chinese cities: unity, scale, ecology, diversity and freedom from traffic.

Hai-feng Tu (1998) deems that the problems in urban squares reflect no division in grades and the lack of local traditional culture distinctive to the city as a whole. He contrasts this with viewpoints of urban design from the book "Urban Design in

Australia" to express his opinions. He further explains that most cities, in particular of medium and small size, only focus on constructing a central square and neglect square construction in quarters and residential areas. Some squares built are soon destroyed and rebuilt due to different or changed preferences of design among developers or governors. In this situation, old blocks are destroyed and re-built; urban square design does not reflect the context and local cultural characteristics, consequently, re-built blocks lose original cohesion and are unfamiliar. Such a consequence is what Xiu-chen Liu (2001) calls the 'stereotype formal symmetric pattern', typified with axial design, large lawns, huge fountains and a big sculpture in the middle. Policymakers emphasise creating a 'new' urban image, argue that urban squares function as showpieces of urban history, culture and development and hence set the stage for 'formalism' (Su 2001).

Cheng-ren Sun and Dan Li (1998) differs from other writers. They put their focus on explaining the influence of post-modernism on urban squares, and not that of classicism or the Baroque. They suggest: "we need to display our achievement but we still need to provide a kind of care through urban square design to create an accessible amenity space for ordinary people". For such purpose, to deal with the relation between environment and users, Jie Guo (2000: 27-33) offers concrete suggestions. Design should emerge from aspects: spatial divisions; edge effect; and public and semi-public demands. This would involve making landforms that separate out different spaces, use three-dimensional planting to disrupt monotony and make diverse use of water.

Xiao-ming Liu (Liu 2004) criticises that each artist is preoccupied with creating aesthetic work and leaving his or her stamp on the results, but in garden and landscape designs do not take the everyday needs of ordinary people into sufficient consideration.

The critiques stated by Kong-jian Yu and Qing-ping Ji (2000: 27) are more impassioned. They sharply criticise 'civic centre fever' and 'grand avenue fever' spawned by a 'city beautiful', or rather 'city cosmetic' campaign. They conclude the 'city cosmetic' campaign in Chinese cities is repeating the mistake of the 'City Beautiful Movement' in the United States a hundred years ago.

The two commentators first introduce Baroque cities and characteristics thereof, and summarise the negative social influence of this design approach based on the 'City Beautiful Movement' in the United States, on experiences from India, Germany and Italy, and on intention, background, methods and lessons. They deem that all these actions share two characteristics. One is that they emphasise monumental and superficial effect, take architecture and urban space as the symbol of power and totally ignore social goals. Another is that they take architecture and urban space as the stage on which to display plans and designs that excite their audience and surprise their visitors. The lessons learned in the United States are given in detail.

Secondly, returning with the situation in China, Yu and Ji (2000: 32) point out that the rediscovery of the western world is a seminal step for the 'city cosmetic' campaign taking place in Chinese cities. Attendant upon the opening of the nation, official and professional groups one by one visit abroad for a short visit of two weeks to one

month. The deepest impression they return with is dominated by the wide boulevards and avenues in Paris, the monumental downtown mall in Washington D. C. and the central squares and public architecture in European and Northern American cities, especially those urban squares, boulevards and monumental buildings in Baroque cities and other existing structures built for City Beautification. Therefore, these urban landscapes instantly become models for imitation without the realisation that they are productions of design ideas from hundreds of years ago and have already fallen behind modern times. They blame the officials who then claim that adopting such a monumental appearance is an essential principle in urban construction, over and above considering the needs of people's daily lives and accentuate a genuine beauty is only created after realising the goal of function.

2.1.2 Summary

There is a broad consensus in general on the public and open urban square. The problems existing in such design and construction in China today can be defined from many different angles and based on different focuses. The problems in design generally converge on aspects of large scale, lack of spatial enclosure, over-formalised pattern, the use of lawns, under-utilisation and the loss of a local distinctive identity. The critiques of the phenomena in terms of design intentions concentrate on the pursuit of visual effect and the neglect of the human dimension and of providing care for citizens.

The perceptions of Chinese researchers and scholars are inclined to identify negative results of modern urban square construction. Regarding the reasons underlying such

problems, their viewpoints diverge into the following: misunderstanding of the spatial form, copying western design ideas and eagerness of policymakers to show their contribution. Suggestions for solving these issues seem only to touch on these or underlying trends, only hit a single aspect and some even set up an inappropriate theoretical base, such as to reduce monotony by planting in three-dimensions, which does not consider size and scale in urban pattern. Additionally, the human dimension is the concept almost all commentators mention and appeal for loudly, but it is difficult to find research or observation about behavioural aspects of urban square use. This makes some conclusions lack power and resolve.

The review of previous literature in China evokes several questions: What is an urban square? What is the significance of contemporary urban square construction? What is its basic attribute? How can an urban park and an urban square be distinguished? How could a better square be created? These questions are hard to address for the unified and explicated cognition of the contemporary urban square in Chinese cities is still waiting for manifestation.

2.2 The evolutions of urban square design

Cliff Moughtin (1992: 87) claims, "One of the most important elements of city design is the square or plaza. It is possibly the most important way of designing a good setting for public and commercial buildings in cities". And M. Webb comments that "squares have a family likeness, but, as in a human family, each has a distinctive shape and personality. That is what makes them so rewarding to experience, and so difficult to create" (Webb 1990: 10-15). Both give a strong impression of what an

urban square is, its attributes and its relationship in a city. As an urban square is so difficult to create, this chapter reviews the evolution of, and experience of, the urban square in Europe in order to prepare the 'ground' for a theoretical perspective.

2.2.1 The definition of urban square

J. B. Jackson (1985: 58) simply defines an urban square and its function, as follows: "A plaza is an urban form that draws people together for passive enjoyment".

Zucker (1966: 19) sketches the urban square in terms of its physical/visual parameters, "For the square, then, three space-confining elements exist: the row of surrounding structures, the expansion of the floor, and the imaginary sphere of the sky above". He further explains that the function of an urban square is "a gathering place for the people, humanising them by mutual contact, providing them with a shelter against the haphazard traffic, and freeing them from the tension of rushing through the web of streets (Zucker 1966: 1).

Kevin Lynch (1981: 443) does not think of the urban square for "passive enjoyment" and narrows the area where urban squares could exist; he summarises "the plaza is intended as an activity focus, at the heart of some intensive urban area. Typically, it will be paved, enclosed by high-density structures, and surrounded by streets, or in contact with them. It contains features meant to attract groups of people and to facilitate meetings".

Marcus and Francis (1998: 14) maintain that a number of features distinguish the urban square from street and park: "A plaza [square] is defined as a mostly hard-surfaced, outdoor public space from which cars are excluded. Its main function is as a place for strolling, sitting, eating, and watching the world go by. Unlike a sidewalk, it is a place in its own right rather than a space to pass through. Although there may be trees, flowers, or ground cover in evidence, the predominant ground surface is hard; if grass and planted areas exceed the amount of hard surface, we define the space as a park rather than a plaza".

Webb's (1990: 9) description is similar with Zucker's but more detailed: "Reduced to basics, a public square can be as an outdoor room, with walls to enclose space, doors to admit traffic, the sky as ceiling". Though he does not define the difference between urban park and urban square, trees and plants have their positions in an urban square for, as he says, "space can be defined without walls; trees or a railing will do the job... the surface may be paved or planted, left open or filled with trees".

These definitions illustrate the design elements and the basic attributes of the urban square in terms of the function it serves for people: how it fulfils a role in their daily lives and activities, and in its form as a three-dimensional space. These aspects are under constant interaction and inter-limitation. These also indicate a truth that the function is crucial to the form and the definition and, conversely, the form and the definition limit the function. The little divergences among the statements of these different researchers are explained though further analysis of the relation between function and form.

2.2.2 Function

The urban square as one of the oldest forms of social space in the west, as an important element of city planning, has disappeared in many cities, been turned into car-parking place or been replaced by "roads, paths, and endless grass lawns" as "the functionalists made no mention of the psychological and social aspects of the design of buildings or public space" (Gehl 1987: 47). At present, it is an important component of preservation for those cities that the urban squares are returned to their original communal purpose and is the important component of the construction of cities that lack an urban square; this phenomenon precisely indicates there are significances or reasons in contemporary times different from historical ones.

Whatever "the sociological or the aesthetic motif" it is important to shape "a void within the town into a three-dimensional area which we call a square" (Zucker 1966: 19); the development of the urban square unfolds a balanced combination of these by two themes. Too often the interest in aesthetics comes at the expense of sociological function and the urban square becomes a stage for displaying the achievement of the combination of art and power. By the nineteenth century and the early twentieth century the aesthetic concept had almost entirely been taken over by grandeur and monumental expression.

A review of the history, from the very beginning of urban square in Europe, the agora in ancient Greece, shows it to be a gathering place for "buying and selling, the practice of law, government and popular worship" (Webb 1990: 28). The first forums established by the Romans were symbols of union, markets and meeting places and

then through the five centuries of the Republic, every Roman's life revolved around the forum (Webb 1990: 29 & 30). The first planned Renaissance piazza, the Piazza Pio II in Pienza "was no play and few players" (Webb 1990: 67), and the market remained where it had always been. The piazza endures, not as useful space, but as a celebration of power and a demonstration of aesthetic principles. "It is a stage in form but not in function", Webb (1990: 69) asserts, but he maintains that while the square could serve as a symbol, it also must fulfil the practical duty of developing or improving a new quarter.

The link between art and power employs the instruments of squares and axes (Zucher 1966: 144). Primarily in Italy and France, these achieved the climax of city planning and spatial shaping, many of them becoming the symbol or showcases of their city or country, and thereupon models that other cities proved eager to imitate. Zucker (1966: 1) praises St. Peter's Square in Rome, St. Mark's Square in Venice, and the Place Vendôme in Paris, comparing their impact to other great works of art for "the unique relationship between the open area of the square, the surrounding buildings, and the sky above creates a genuine emotional experience" and there are no doubts about the charming of public life they invite. But he warns that, without the popular touch, the grand square will be "a deserted square", citing St. Mark's Square in wintertime as described by the landscape architecture Lawrence Halprin. "All of a sudden the air became dark with birds, the square filled with the beating of thousands of wings, the noise increased and increased until it was deafening, and the deserted square became absolutely filled with pigeons. The noise was incredible – even frightening. They had come to feed, and when they had finished they left just as quickly, and the great square was empty and quiet again" (Halprin in Webb 1990: 77).

However, when the instruments of the square and the axis, that had developed to express philosophical enlightenment, passed into the hands of the executors of the City Beautiful movement, they had been distorted beyond not only the needs of the public but also the human scale, the essential principle of aesthetics (Zucker 1967: 7). In the great commercial cities of Middle and Western America, civic leaders used them to overcome collective inferiority complexes and boost business based on the principle that "make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will never die, but long after we are gone will be a living thing, asserting itself with ever-growing insistency" (Daniel Burnham, quoted in Hall 1988: 174). In the newly designated capitals of far-flung corners of Empire, British civil servants commissioned plans for "an Anglo-Indian Rome ... one size larger than life" that would express imperial dominance and racial exclusiveness. And in Germany, culminating in the 1930s, totalitarian dictators sought to impose megalomaniac visions of glory on their capitals (Hall 1988: 175).

Moving forward to the 1960s and 1970s, many urban squares were renovated and many new ones created throughout Europe and the world, although the progress of technology and the change of life form reduced the necessity for people to spend time in outdoor shopping and meeting each other in public space, through indirect telecommunications that become the new medium for trade, information gathering and meeting. The modern developments of urban squares in different countries illustrate different emphases and processes. The goals, priorities and extents of measures taken varied from city to city, most interesting of all being the visions that constituted a combined strategy aimed at improving overall urban quality by

including social, functional and ecological aspects as well as traffic concerns and architectural considerations (Gehl & Gemzoe 2000: 24).

Denmark became one of the pioneer countries rethinking the significance of urban square in recent times. Copenhagen, without resorting to earthshaking construction projects, has taken step by step approach since1962 to "a beautiful and human city". The very simple and very effective measures it took were "taming and controlling city traffic, as well as reclaiming streets and creating quality spaces for popular use". The delimitation of pedestrian areas, repaving and refurbishing urban squares and relieving them of parking places avoided the fate of the city as a noisy place overwhelmed by traffic that can be rather unpleasant and at times frightening to be in, a state into which many other places in the world have deteriorated over the years. Luckily for Copenhagen, its centre keeps its "medieval street pattern and is dominated by aged buildings at a good human scale", and its managers understand the quality of a city, the essential mix of both sociological and aesthetic motifs. (Gehl 1987: 1-19)

Barcelona, one of the most important cities in Spain, has established its public space in a different way in the past two decades. Because of its dense urban structure, besides renovated squares in the city centre, many new public spaces were created by pulling down dilapidated apartment buildings or abandoned factories. The characteristic of its urban policy was that "public spaces spring from the need for room for people to gather in true democratic tradition, as well as ample space for pedestrians". Urban squares with mainly hard surfaces and furniture, occasionally softened by trees, have the character of "stone rooms". Parks, as a distinct urban typology, played the role of urban oases, displayed generally through large green landscapes and often with gravelled areas and large surfaces of stone for various

activities. One particular role of design was to introduce plenty of works of art in new parks and squares under the motto, "Move museums into the street." Even a bench or lighting fixture had to be designed for one site exclusively (Gehl & Gemzoe 2000: 26-33).

People in the United States have less of a tradition than do Europeans for strolling, promenading, or frequenting outdoor cafes but, at present, more and more people are recreating in city centre outdoor space (Marcus & Francis 1998:13). Carr and his co-authors analyse the primary motives most often cited by the producers and managers of public spaces. To them, making and remaking public spaces in urban America includes "public welfare, visual enhancement, environmental enhancement, and economic development". A normally unstated goal of most producers of public space is 'image enhancement', which can be among "the most important in determining the design of spaces" (Carr *et al.* 1992: 10-12)

The existing public spaces built for such goals in different times display different consequences. Some city centre plazas "rely too heavily on inappropriate models, lacking relevance to American life" (Chidister 1989 quoted in Carr *et al.* 1992: 17), such as the Boston City Hall Plaza which is one of Boston's most monumental and least-used public open spaces, "a theatre constantly waiting for its audience" (Webb 1990: 182). It was clearly designed to "fulfil architectural rather than human needs, as many of the most basic aspects of comfort have been ignored" (Carr *et al.* 1992: 88-89). Some of them play important roles in public life such as the Rockfeller Square and Paley Park and these are discussed later in this chapter.

The development of urban squares in the United States is more diverse and complicated than in Demark and Barcelona; its monumental ambition and commercial interests are very "American". Perhaps because of this, researchers in the United States have plenty of ideas about the tendency and needs of public spaces. When Lynch (1981: 283) discusses the advantages and disadvantages of the Baroque model, he deems that it works for the purpose of "using the city as an expression of central power and a strategy for attaining visual magnificence and control within available means". Carr and his co-authors (1992: 18) conclude that "Public space design has a special responsibility to understand and serve the public good, which is only partly a matter of aesthetics". Heckscher (1977: 142) accentuates the basic function as well, for he says "the best of squares in the United States are filled not only with historic reminders in the form of monuments and plaques, but with varied expressions of contemporary life. They provide a stage where people meet and mingle, where children play, and where the commonplace rituals of city life are carried out". However, although what constitutes the 'best of squares' might be easily appreciated by some researchers consciously and some users unconsciously, most visitors, especially short term visitors, might gain a deeper impression from visual impact rather than from social utilisation.

Urban squares have, through time, changed from being the foci of public life as market places, meeting places and traffic places, to stages displaying art and power, and finally to recreational and meeting places of modern life. The journey from servicing people's daily lives to power expression, image enhancement and now returning to human and social use, seems a circle, finally returning back to the

original start-point, although the components they embraced have irreversibly changed.

2.2.3 Form

That an urban square is "a three-dimension space", confined by three elements, "the row of surrounding structures [walls, trees, or railing] (Webb 1990: 9), the expansion of the floor and the imaginary sphere of the sky above" (Zucker 1966: 6-7) is essential to its basic spatial shape. Zucker (1966: 162, 180 & 193) deems the physical bounds are very important for, if "no vertical spatial confines exist, neither area represents a real square". He explains how the trend of unlimited space and openness became a fashion in the eighteenth century over strictly limited space, arguing thus that the Place de l'Etoile, with the Arche de Triomphe, one of the symbols of Paris, can "no longer be considered a square in our sense". His classification of squares could be considered as an analytical illustration of his points on the three-dimension space.

According to the basic type and different shapes, Zucker classifies urban squares into five archetypes, the *closed square* (space self-contained), the *dominated square* (space directed), the *nuclear square* (space formed around a centre), *grouped squares* (space units combined), the *amorphous square* (space unlimited). The specific function of a square does not automatically produce a definite spatial form, as each function could be expressed in many different shapes (Zucker 1966 quoted in Carmona *et al.* 2003: 146).

Zucker explains why, according to this classification of spatial form, although squares of certain types prevail in certain periods, general space-volume relations are independent of particular historical forms. There exist definite basic types of squares, which appear again and again. They show common characteristics in their spatial form, although their artistic expressions cannot be pressed into dogmatic categories. The specific function of a square, for instance, as a market square, as a traffic centre, or as a parvis, never produces automatically a definite spatial form. Each particular function may be expressed in many different shapes. Therefore, the question remains as to how important that the specific spatial form is to urban square design.

The three-dimension spatial concept is not only significant to the shape of an urban square but it also lays down conditions to enrich the aesthetic sense and for squares to be attractive. The unique relationship between the three elements would give an urban square specific visual and kinaesthetic relations to determine whether a square is a hole or a whole (Zucker 1966: 3). The facade of surrounding building and the "art of relationship" (Cullen 1961: 10) with these surrounding buildings is what will invite people to stay and appreciate them. This is particularly so as the public use of buildings around a space extends the functional connection between the outside and the inside and; to an extent, keeps the presence of people to enrich the vitality of squares.

This three-dimensional form could display countless different characteristics due to the various changes of each of its space-confining elements; for example, the surrounding structures could be of uniform of height or could differ, and their storeys could be at differing levels, but these themes should correlate to the function the

urban square serves for the people, for public life. Such a relationship is decisive to those elements, which play concrete parts to give the figures of squares. At the simplest level, the scale and the materials are two basic factors, the various materials convey a certain sense of proportion and relate to each other in a certain play of scales to embody the image of the square.

In contemporary urban square construction in China, the scale of urban squares and the surface materials – hard pavement and extensive lawns – dominate the thought of the designers and developers, as realised by Chinese scholars and discussed in the earlier part of this chapter. Therefore, it is necessary to delve more deeply into the overlooked matters of the scale and the interrelations between the elements that describe the three-dimensional space to discover the root of problems existing in contemporary urban square development in China.

2.2.4 Scale

Zucker accentuates 'the human scale' as the focal point of the correlation of principal elements to confine a square. He says: "as long as the size of the human body and the range of human vision are not recognised as the basic principles, any rules about absolute proportions, about design and composition of forms and motifs, about symmetrical and asymmetrical organisation, etc., are meaningless" (1966: 7).

Moughtin (1992: 36-42) states, "Human scale is a measure of real size. The dimensions of buildings, squares and streets are compared with the proportions of the human figure. Man is the measure used for the built environment". Referring to

historical and modern theories, he discusses proportion and scale deeply in the context of architecture and urban design and concludes that a hierarchy of scales exists in urban design. At the most basic level, the proportions of a public square, "mean the relation of the height to width to length"; scale, in contrast to proportion, depends upon the comparison of one set of dimensions and proportions with another set. His main points of scales are as follows.

- At the intimate human scale, 12 metres is the maximum horizontal measure; at the normal human scale this horizontal dimension is about 21-24 metres;
- At the public human scale, 1.5 kilometres dictates the limit of perception;
- Superhuman or spiritual scale calls for monumental design; and finally
- Extra-human scale is that of the untamed natural landscape together with those structures or technologies used to subdue its expanse and harness its resources.

The human and the superhuman may reinforce each other by their contrast as long as the superhuman can be related back to the human scale, otherwise the composition becomes colossal in building and space designs. The works based on extra-human scale are best seen at a distance or from a rapidly moving vehicle, and are not associated with the leisurely pace of the pedestrian.

Gehl (1987: 67) suggests that the maximum distance for being able to see events is between 70 and 100 metres and, for seeing facial expressions and perceiving relatively clearly the feelings and moods of others, the distance has to be reduced to 20 to 30 metres.

Lynch (1984) believes that dimensions of 40 feet (12 metres) appear intimate in scale; up to 80 feet (24 metres) is still a pleasant human scale; and that most of the successful enclosed squares of the past have not exceeded 450 feet (112 metres) in the smaller dimension.

These theoretical suggestions might demonstrate a historical limitation, for example the proportion between the width of floor and the height of surrounding buildings is difficult to achieve in some modern city centres dominated by high-rise edifices. Additionally, the characteristics of enclosures in space dominated by hard surfaces (discussed in the following section) also limit the scales of urban squares. Spatial control is easily lost in a large-scale plaza and large areas covered by hard surfaces might be "immovable, uncomfortable, and oriented inward, away from any activity" (Carr *et al.* 1992: 89).

As the function of an urban square always depends upon its social qualities, the balance and harmony of other related proportions and scales are essential in making people feel comfortable. Although this research does not focus on how to design an urban square, this review of the principles of scale is helpful in understanding why plazas in China have been criticised for being too big and why the adaptation of multi-plant vegetation and grass seems a weak remedy for reducing the monotony and impersonal nature of these overwhelming expanses.

2.2.5 Materials and design elements

The materials used in urban squares can vary from being natural or manmade, hard or soft, and solid or liquid and, over time, some materials have usually been used in certain forms such as water generally appears as fountain features in urban squares. Different materials generally represent different styles, regions, economic bases and different meanings in terms of culture and times. As Halprin (1972: 7) notes, in working with the materials, one "must allow them to interact with the indigenous character of the city, its natural topography and views, its particularly unique features, its people and its cultural heritage". G. Zordan has same idea and has embodied it in the renovation of Piazza Ferretto, Mestre, Italy. The objective of the design concept of the Piazza Ferretto "was to re-establish the complex geometry of the square and enhance the different spatial elements Piazzetta Matter, Piazza Ferretto, Piazzetta Da Re and the parvis of San Lorenzo Church" (Zordan 2004). As a symbol of this concept, a golden-bronze sculpture, framed by a fountain, was placed in the centre of the square and a uniform paving material was used, tying together the different areas to one harmonious unit.

For the purpose of this research, the review of materials and design elements are focused on fountains, sculptures and lawns as these elements have been widely used in contemporary public open space design in recent years in China.

Water and fountains

Water is a natural material that has been used in urban squares universally as it is called, "the most deep rooted and atavistic part of our nature" (Halprin 1972: 134). It is shaped into fountain features or limited to ponds universally. Originally, "fountains, erected as religious or secular mementos, may have created poetic corners or lively

centres for the exchanges of women's gossip but they were never more than a decoration of the square, without much influence on its three-dimensional shape" (Zucker 1966:91).

The use of fountains in Italy was universal and influenced other parts of the world from the past to the present. " The Italian civic fountain appeared in every square and every piazza, usually combined with sculpture, in a never-ending, fascinating interplay of marble and water" (Halprin 1972:135). Villa d'Este, Tivoli, "with its terraces and impressive concentration of fountains, nymphaea, water jets and water-powered musical instruments, represents a much emulated model for European gardens of the Mannerist and Baroque periods" (Madonna 2003: 3).

Although the designs of fountains are not limited in the territories of countries, the style usually expresses the attitude of a certain region or country, such as the French attitude – "to be beautiful, natural elements had to be controlled. The waters of France were quieter sheets – great, reflective, symmetrically organised and curbed basins; their control – like the control of their trees and ground planes" (Halprin 1972:135). The fountains in Versailles and the Palais De Chaillot in Paris fully convey the French attitude.

Today, the advances of modern technology have released great new possibilities for the use of various water effects in urban landscape. Sound and lighting, electronic and computer controls allow new types of water features and we must beware of the danger, losing water's "great virtues of unpredictability" (Halprin 1972:135) and of the enjoyment of playing. "Place des Terreaux is almost magic" (Gehl & Gemzoe

2000: 161), and is representative of modern fountain features in urban squares. More discussions of the use of fountains combined with successful examples of urban squares are introduced in a later section.

Sculptures and structures

"Sculpture has always peopled our cities' squares with universal images of man's heroic idealised qualities"; this is a very penetrating remark by Halprin (1972: 87) Sculpture and structures in urban squares play important roles in the decoration and beautification of urban landscapes and in the expression of historical development and cultural values. Therefore, Halprin sighs with feeling, "how can one think of Florence without its David placed in the Piazza della Signoria or of Rome without its Marcus Aurelius placed on the Capitoline Hill by Michelangelo, and now of Harlow New Town without Moore's family group."

Sculptures and structures as the main component of public art have been widely used in modern urban public space development. Focusing on the reconstruction of Coventry (UK), Hubbard and co-authors introduce a series of highly symbolic and distinctive public artworks and conclude that 'the production and consumption of public art encapsulated the tensions that existed between different visions of the city' (Hubbard *et al.* 2003).

Moreover, sculptures and structures e.g. fountains, not only provide a point of visual focus in urban square, but their role in spatial organisation is constructive and effective. On this point, Ching (2000: 122 & 124) provides a theoretical explanation. He illustrates how different types of vertical 'linear' elements, such as columns,

obelisks, or towers engender different effects in an open space. He gives the example of the Obelisk in the Piazza of St. Peter, Rome, to articulate a centrally located structure asserting itself as the centre of the field and defining equivalent zones of space between itself and the surrounding buildings; the tower in Piazza del Campo, Siena, Italy becomes the terminus to a number of horizontal axes and thus acts as the focus of the enclosed space.

Lawns and trees

Besides invoking different attributes in an architectural sense, the most obvious focus of materials reflecting the definition and basic form of urban squares is the surface, whether soft or hard or a mixture of the two. The introduction of trees and planted areas into the townscape under the intention of going 'back to nature' took place during the second part of the eighteenth century and contributed much to "the loosening of the baroque and classicistic stereometric forms within the city" (Zucker 1966: 161). Since squares were "no longer regarded as three-dimensional units" and in "a vain attempt to transplant the charm of a miniature English park into the heart of the city" (Zucker 1966: 5 & 6), plants, bushes and lawns became the design elements of urban squares. In other words, spatial enclosure was no longer sought and squares tended to be loosely defined, expansive areas compared with ancient squares.

There comes a wider use of materials because the traditional function of the urban square, as for example a market or parade place was no longer dominant and the functions concentrated on people "strolling, sitting, eating, and watching the world go by". Urban squares with hard and soft surfaces are natural responses to this function.

2.2.6 Parks and urban squares

The 'Green' was developed as something between a square and a park. "If grass and planted areas exceed the amount of hard surface, we define the space as a park rather than a plaza" (Marcus and Francis 1998: 14). In other words, the seeds for ongoing confusion as to the different roles and characteristics of the urban park and urban square were sown. It may be useful to outline a brief comparison between urban squares and parks in terms of function, form and location to understand these opinions and resolve confusion.

An urban square is only a relatively independent space that "relies upon a surrounding wall to enclose it and give it form". By contrast, the park is "content to be left alone, asking nothing of the city except that it be recessive and relatively invisible" (Heckscher 1990: 146). Urban squares have a close relationship with other spatial forms and factors. Parks in an urban pattern are relatively more independent and the rich vegetation could make them harmonious with any surroundings.

The parks are a later creation than squares to "enhance the city or to relieve its ills" (Heckscher 1990: 139). From their origin they have been seen as "the lungs of the city", a substitute for the countryside, offering exposure to fresh air and sunlight, with the opportunity to stroll freely and relax, as an antidote to the oppressive physical and psychological conditions of city life (Carr *et al.* 1992: 10). The square, as the oldest form of open spaces, is "more down to earth in its daily uses" (Heckscher 1990: 139), located in a dense area and shaped by surrounding structures that directly and indirectly dictate the levels of occupation by people.

In ancient times, a city was merely a manmade core surrounded by nature. It did not suffer industrial pollution and mechanical noises like today's sprawled webs that encroach upon nature. The urban green spaces in past times were the paradises of the privilege classes or royal hunting grounds, and did not necessarily to play the same role as oases or as "the green lungs" of today. So the urban park emphasises an ecological function, bringing nature into the urban area; the urban square emphasises daily activities. This essential difference establishes prerequisites for the choices of materials.

2.2.7 The successful urban square

In the previous sections, the basic points of urban squares are reviewed and what is an urban square is outlined. This section focuses on what might constitute a 'better' urban square. There are many ways to understand and evaluate whether an urban square is better or not. Ching (1996: 320) accentuates "a sense of unity with variety is the ideal" in his discussion of the principles of architecture and space design; Webb (1990) in tracing the evolution of the square, selects squares to describe in detail their beauty, history and vitality; Zucker (1966) discusses "artistically relevant squares" and Carmona *et al.* (2003: 144) focuses on the spatial features of town and square, expressing mainly historical, theoretical, functional, and aesthetic considerations; Moughtin (1988) examines fine examples in terms of function, structure and symbolism based on urban design. In exploring the context of the United States, Carr and his co-authors (1992) contend three critical human dimensions: the users' essential needs, their spatial rights and the meanings they seek for guiding design and

management in public space. Marcus and Francis (1998), talk about the aspects which should be considered in detail during urban square design process; and Heckscher (1977) notes there may be "four characteristics of the successful square". Although the researches have unfolded the issues from different angles and backgrounds, there are some general viewpoints among them, which are discussed in more detail below.

2.2.7.1 The characteristics of better urban squares

Heckscher (1977: 145-148) identifies "four characteristics of the successful square": the square exists in an urban context, the square is linked to the street system; the square is a three-dimensional concept; and the square is a mirror of the community. These concepts connect directly to the basic elements of square, its need to be part of a large whole, its relatedness to the city streets, its three-dimensional design and its varied uses.

An urban context, as generally understood here, means a high density of buildings and population. Heckscher see this exemplified in Lake Anne Square of the new town of Reston in the United States; "the artificially created central place becomes truly alive as populated areas grow up around it". He suggests that the suburban area must "find a form of open space adapted to the loose texture of its settlement". The first basic elements could be considered as a site selection, as Lynch (1981: 443) suggested "at the heart of some intensive urban area", and it has the potential to be "an activity focus".

Being linked to the street system indicates that urban squares are not isolated and have an inseparable relationship with the larger urban pattern. Originally a plaza "has been formed by merely widening the street at a certain point, permitting pedestrians to flow around a church or fountain" (Zucker 1966: 76), although modern squares in planned cities, especially in grid-pattern cities, as holes in the checkerboard, are still parts of the urban pattern of open spaces. Thus squares and streets are interconnected in space; plazas form a part of the street scene and streets are the entrances and pathways. The contrast in their physical scale gives rise to drama, expressing confinement and breadth, comparative darkness and light. This relationship is decisive to the urban square, in other words that it must be considered within the wider urban design concept, to be unified with its surroundings though spatial continuity and transition.

Yet as much as the surrounding structures are decisive to the extent of spatial meaning and enclosure, individual structures such as monuments, fountains and flagpoles and so forth similarly organise the space of the square, according to the two types of urban squares Zucker classifies (the dominated square and the nuclear square). Additionally, the intrinsic lasting factors, topographical, climatic and national, and the changing influences of static and dynamic forces, such as stylistic and temporary influence, affect the appearance of an individual square to make it locally distinctive and symbolic of its times.

The last characteristic of a successful urban square, Heckscher (1977: 147) sums up as "the square is a mirror of the community", where his intention is totally focused on the situation in the United States. For general understanding, the varied uses of public life are always the basic character of urban square.

Through a literature search, Kapper and Chenoweth (2001: 149), critically assesses the field of landscape architecture by evaluating its societal values as demonstrated by the promotion of health, safety, and the general welfare. Carr and his co-authors (1992:19 &20) delve into this more broadly, they deem that to "serve the public good", public spaces should be "responsive, democratic and meaningful". 'Responsive' means those spaces "designed and managed to serve the needs of their users" and 'democratic' means that spaces "protect the rights of user groups". As the term public open space implies the freedom to use a place, access, action and claim become basic to it (Carr *et al.* 1992: 185 & 186). People can act more freely there than when under constraints of home or workplace; they can temporarily lay claim to a piece of turf for sitting and lying on or playing games as they want, and meanwhile share the space with others without restraint such as signs ordering them to "keep off grass" (Carr *et al.* 1992: 138) or, 'don't climb or lean on' (as can be seen in many parks and squares in China).

'Meaningful' denotes those spaces that "allow people to make strong connections between the place, their personal lives, and the larger world. They relate to their physical and social context. These connections may be to one's own history or future, to a valued group, to one's culture or relevant history, to biological and psychological realities, or even to other worlds" (Carr *et al.* 1992: 20). In brief, public spaces are not only places that satisfy the needs of people's daily life but also express the congruency of history, culture and customs. These spaces should be familiar to the users and distinctive as well; if public spaces lack such meaning, they would not help

people in "connecting their surroundings with the rest of their lives" (Lynch 1984: 158).

A successful urban square thus needs to be a break in the 'concrete jungle', "be a part of a large whole" (Heckscher 1977: 148), to be related to the city streets, a three-dimensional space that satisfies varied uses and has strong connections with the values of the wider urban cultural meanings. These fundamental elements might unfold differently in different regions or times but their universal significance also exists across regions and times.

2.2.7.2 Successful examples

Numerous urban squares have been built and some of them have been praised and admired throughout history and across many regions. Each has its own 'story', no matter how it succeeds in describing its history, social life, aesthetics, architecture or materials; there are so many things to express. For the purpose of this research, the review of successful squares concentrates on their characteristics and special contributions in terms of design principles, architectural concepts and utilisation, to give evidence for the application of a set of factors. These may be useful for the rest of the research and helpful to inspire and stimulate the consideration for urban square development in China.

Ancient times

The Piazza del Campo in Siena is an urban square almost universally praised by all. It fully expresses "the peculiar beauty of medieval squares", "picturesque combinations

of individual buildings" with "painterly values" not "structural relations" (Zucker 1966: 96). Its large half-circle is closed by the building line of the four-storey Palazzo Pubblico (1288-1309), the Mangia (1338-49) tower adds a strong vertical accent not only by its height but also by "its shadow which steeps around Siena's Campo like that of the gnomon on a sundial, marks the shifting tempo of everyday life" (Webb 1990: 12). The Campo remains the undisputed centre of social life as "a meeting place and public living room for its citizens" throughout the years (Gehl 1987: 43).

St. Mark's Square in Venice, "the ceremonial gateway to the city", with high Renaissance style, is "the ballroom of Europe"; "if ever a square was to become the symbol for a whole city" (Zucker 1966: 113) this would be it. Originally, around the year 1000, the square served as a market place and as the parvis of St. Mark's. It came into "a decisive shift from utilitarian to ornamental" around 1500. In spite of its splendid architectural art and various events, there are several points that should be noticed.

Its position in the city makes it the first sight for people entering across the sea route. As the city's prime artery it has ample opportunity to be crowded. The public buildings of library, church and government and its original use as a market ensure a plentiful flow-through of people. Its highest point, the Campanile, was originally a nautical signpost. All these condition the square's heritage and its coherence. The unity of the surrounding buildings and contrasting isolation of the church façade make the square distinctive either in representing the High Renaissance style or other architectural patterns. The Campanile with its overwhelming height, the relatively small facade of church, the surrounding Sansovino and Scamozzi and the enlarged

size make a kind of tacit understanding. Additionally as its one side is totally open to the sea, its large scale under the contrast of the grandeur of the sea significantly increases its overall nature.

Its unified ensemble is created by four very different architectural features and its present appearance is the result of many additions and changes, of which only the most important took place between 1536 and 1640 and around 1810, through a span of time nearly three hundreds years. It is not a miracle of speed in creation (Zucker 1966: 113-115 & Webb 1990: 74-77).

In St. Peter's Square in Rome, the grandiose parvis is never too big for its visitors as it is the focal point for Roman Catholics around the world. The ancient obelisk set up in the cross-point of north-south and east-west axes define its axial vistas. Vast corridors limit the space and enhance the unity. Its gigantic dimensions have been controlled by relative proportion, such as the scale of colossal columns of the façade of St. Peter's as "the point of reference of Bernini's square". The concept of arrested movement might be more meaningful to professionals but for visitors it is a square with grandeur and rich characteristics (Zucker 1966: 150-152).

The Campidoglio in Rome is not a "sacred area" and has no religious connotations; it represents an entirely civic institution but it is also a monumental project. The square took one and half centuries to be finished. The wholly original work of art, a stage for ceremony and a symbolic link to the ruins of the Forum below, was created on the designs of Michelangelo and his successors, Giacomo della Porta and Girolamo Rainaldi (Webb 1990: 131), who greatly manipulated the topography and existing

buildings. Its monumental taste is not, like St. Peter's Square, strongly displayed in scale. "Michelangelo envisioned the Piazza di Campidoglio as a monumental stage set and employed all artistic means to suggest movement into depth and to create the impression of gradually increasing volumes which frame the space in between". Zucker (1966: 147 &148) also points out: "If this square looms much larger in our memory than it does in actuality, it bespeaks the power of its scenic organisation". No matter from which direction one comes into the square, the Campidoglio reveals itself only as one moves through and around it. It is a fine example to illustrate a monumental and picturesque square as a spatial and artistic event.

Another well-known square created by combining topography with layout is the Piazza di Spagna in Rome. It is a miracle created by planners in which nature lent a helpful hand to the spatial vision. As Zucker (1966: 155 &156) describes, "with its 137 steps, the square represents the climax of stage effects in Roman city planning on a larger scale". The Spanish Steps connect two topographically different levels, integrate "the unique spatial and visual experience" and become "the visual and spatial centre". The "free-flowing steps" do not as usual lead to a square in front of a monumental structure but bring the vivid character from the Barcaccia fountain into the space, expressing its dynamism. Said to be inspired by the discovery of a Roman boat fountain, or the memory of a ship that was once beached there, the Barcaccia fountain flows with history and, as the space functioned as a flower market for many years, all these strands enrich its coherence and romantic atmosphere.

The Piazza di Trevi has similar amenity as the Piazza di Spagna but totally differs from it in layout. The Trevi fountain with its "exuberance of shape and sound"

dominates the miniature square "not much more than a broadened street". The combination with the facade of Palazzo Poli and, ten steps below ground level, the arrangement of the piazza leaves much space for people to appreciate the "liquid architecture" (Webb 1990: 141) in a sumptuous interplay of architecture, sculpture and water (Zucker 1966: 157). The story it expresses, the grandiosity it displays and the spatially isolated church are decisive to infuse the splendid artwork into the miniature space and the context of the city.

Modern times

The Beaubourg Forum is a highly animated square for its location and association in Paris and very special for its integrated artwork. It consists of pedestrian zones neighbouring the Centre Pompidou, a museum, library and cultural centre for Parisians, and gathers in different social groups. In the formal forecourt, the Rites of Spring Fountain's primary colours and clanking mechanisms affectionately mock the constructivist monumentality of the Centre. Its jocular style makes it a focus of genial contrast against the surrounding buildings bringing together, ancient and modern, elegant and bizarre. The splashing water attracts children of all ages perfectly as a playful meeting place for all citizens.

Quite different from European style, the North American square gives emphasis to offering "an open stage for varying activities" (Gehl & Gemzoe 2000: 235). The Rockefeller Plaza in New York is a typical example. It brings the comfort of human scale to the people who sit or skate on its sunken plaza and gives people an opportunity to overview something by standing on ground level, a situation not easy to find in this extremely dense city. The sunken plaza is "the symbolic heart of New

York". Its location enriches its character and an ice rink as a winter fixture from 1939 on, and other programmes, concerts, floral displays, boxing tournaments and so on draw the crowds. It is not difficult to believe that "New York would seem incomplete without the Rockfeller Centre" (Webb 1990: 173 & 174).

Very different from the Rockfeller Plaza in New York is Paley Park. It takes real work with the simplest materials to create a lousy space ... or the most civilised pocket plaza . Trees, fountain and paving define the space which on one side opens to the pavement and is walled by buildings on three sides. The soothing roar of a waterfall blankets the sound of traffic. The tiny plaza expresses the real meaning of urban public space (Webb 1990: 215). The Auditorium Square in Portland is also well-known for its fountain but its shape aims to be elegant and enjoyable, soft flowing curves soften hard lines, flowing water covers static masses and, sculpture, stage and fountain integrate into a whole for watching, dance and play. This square expresses modern ideas, which advocate recreational participation.

It can be said that all the beauty of these squares has been contributed to by every structure and factor they are related to. Thus "location and association" (Webb 1990: 201) with the surrounding buildings, the connection of street system, floors, staircases, fountains and monuments, are all inseparable parts of each square. This may be one of the reasons why a 'good' square is so difficult to create. These successful urban squares demonstrate that to be attractive and memorable, to have monumental spirit and aesthetic meaning, does "not depend on size and scale" (Zucker 1966: 1), but on "distinctive characters and rhythm". Through being so

integrated to urban life, they change but "in essence they remain the same" (Webb 1990: 12, 217).

2.3 Conclusion

This chapter first outlined the understandings of Chinese researchers in relation to contemporary urban square development and the motives, tendencies and problems based on these. The chapter then focused on function and form and reviewed the basic elements and attributes of urban squares. An urban square depends on functions, and is structured by a form. The functions include two aspects, social and aesthetic. The social aspect basically is aimed at serving public life and the aesthetic aspect fundamentally meets the needs of public life psychologically and physically. The two aspects of function is decisive to the form of an urban square, that is a three dimensional space. Therefore, the relationship of the functions and the form of an urban square is that the functions are decisive to the form and the form embodies and satisfies the functions. The manifestation of concepts combined with the review of basic characteristics of successful squares and analysis of examples to make the basic points in modern urban square development clear as follows.

1. Human scale is the basic principle of 'good' design and construction. An urban square could be big or small, but human scale is the meaningful measure of its effective 'size'. The aesthetic dimension is another and necessary principle, but of a lesser order.

2. Serving people and supporting healthy urban life must be the essence of urban square development. Monumental expression in scale should be seen as obsolete and related to previous epochs.
3. An urban square is a three-dimensional space.
4. An urban square is a part of the whole, not only in urban space and pattern but also in the wider urban context.
5. An urban square is most suitably sited in a compact area in terms of buildings and population.
6. The process of construction is not restricted to one period, concentrated in a short time, as an urban square must be "part of the living organism of a city with its changing socio-economic and technical conditions" (Zucker 1966: 5). An urban square may be consolidated or changed due to the erection of new surrounding buildings, or may only become a real square once people come to use it.
7. An urban square is dominated by hard surfaces. The roles that urban squares and parks play in urban structure and urban life only partly overlap, for urban squares are important for, ecological contributions only in certain conditions.

In recognition of these fundamental points, conceptual confusions that plague urban square design and construction in China, such as pursuing the monumental in scale, and the proportion and function of greenery and the lack of analysis of public needs are evident. The extent to which these misunderstandings become clear in practice is explored in the case studies later in the next chapter.

Chapter 3 Case Study

3.0 Introduction

The previous chapter establishes that an urban square is a three-dimensional space with mostly hard-surfaces and serving public life. It is a part of urban open space and differs from other spatial forms, streets, parking places and parks in its function and form. Its basic functions, meeting the needs of public life and aesthetic appreciation, are decisive to its form and in the best instances this is based on the human scale and local conditions. The daily use of the urban square has changed as a consequence of the social development through the centuries but the fundamental functions of urban square for public daily life are always the same. Yet the design and construction of urban squares is an entirely western, European tradition. Their recent arrival in Chinese cities where they have never before formed a fundamental part of the urban or social fabric, have led to obvious conceptual misunderstandings and confusions that have been noticed by many Chinese scholars and observers. In order to identify and understand the existing problems in urban squares in China in depth, this chapter undertakes case studies (Francis 2002) combined with further literature research, interviews and observations to distinguish the character of modern urban square development and to systematically evaluate it.

As mentioned previously, the square as an urban form was incorporated into urban planning and urban design after the founding of New China in 1949. Since then, new-build or transformed squares mainly belong to two types: thematic sites or assembly and dispersal hubs; leisure spaces only appeared in the early 1990s. The principles

behind the creations of these urban squares are diverse, but generally focus on the emphasis of 'social and environmental enhancement', 'particularity' of place and 'high quality' design, which are frequently mentioned by designers and government officers. 'Greenery' and 'illumination' are also routinely taken as important measures to increase the quality of the environment.

With the conviction that "the purpose of planning or design is not to create a physical artefact, but a setting for human behaviour" (Deasy, quoted by Marcus & Francis: 1998: viii) and "the providers and designers care about people and want to create places that are socially appropriate" & (Marcus & Francis), the author has visited many of them in the past seven years on previous work and for the present research. During her site visits, in order to have a best view to carry on observation, she chose the hotels as close as possible to overview the squares, stayed inside or walked around taking pictures, recording events or general use, talking with visitors or writing notes to reminding herself for further reference.

Figure 3.01 Map showing location of case study cities in China

As this research is concerned with the problems of modern urban square design and construction more from macro- than a micro-view, the case studies focus more on the

embodiment of an urban square's basic attributes and less on detail design methods and skills. The projects collected are the most important public spaces in their cities, have been emphasised on by government at each level (town, city and region), and many of them have been awarded prizes by central or local authorities.

China is a big country. From region to region there are many differences in terms of history, culture, economy, climate and topography. Regarding climate, China is dominated by dry seasons and wet monsoons, which make for clear temperature differences in winter and summer and rainfall is uneven between the four seasons. In winter, northerly winds coming from high latitude areas are cold and dry, and in summer, southerly winds from sea areas at lower latitude are warm and moist. In addition, climates differ from region to region because of the country's extensive and complex topography. In northeast China, summer is short but there is much sunshine, while winter is long and cold. Strong winds in winter and spring become sand-storm more and more often in recent years. In southwest China of low latitudes, the land is elevated high, and has characteristically vertical seasonal zones. Therefore, the cases drawn on represent various background in terms of history, culture, economy, climate and topography in order to explore the general issues in urban public open space development throughout the country.

The cities involved in this case study come from different regions of the country and are marked on figure 3.01. For convenience of analysis, the cases are grouped into three categories according to their main pattern of utilisation: thematic sites, assembly and dispersal hubs and leisure spaces for relaxation.

The thematic sites refer to those squares associated with a particular building, such

Figure 3.02: The Tiananmen Square, Beijing
(Source: the author October 2002)

as the city hall, or those designed to express certain meanings such as to memorialise a person or event. Mass rallies or ceremonies usually were the main activities but since the 1990s such squares have started to become used for people's daily lives and have been considered as showcases for their cities and important parts of the image of the city.

Tiananmen Square (figure 3.02) is the most important one of them. The symbol of independence and liberation, it was planned in the early time of New China and finished in 1959, as the Monument to the People's Heroes (erected in 1958) and the surrounding buildings took shape. Similar squares include the People's Square in

Shanghai which has been transformed from a racecourse, and the People's Square in Dalian, originally built for memorialising the relationship of the Soviet Union and China. These squares are the first group to have undergone changes in function.

3.1.1 **The People's Square** in Shanghai

Location and context

Shanghai is the largest and densest city in China with population of more than 7 million in its core area. The Yangtze River empties into the Yellow Sea just north of it and the Huangpu River runs across its centre. This metropolis is also the most attractive city for its position in the national economy and its characteristics of modernism and mixed culture of orient and west. Monumental buildings push skywards, glinting department stores swing open their doors to the stylish elite and the Bund with its elegant sweep of European architecture and landmark hotels lining the gentle sweep of the Huangpu River symbolise the city. The People's Square neighbouring them lies south of the Bund.

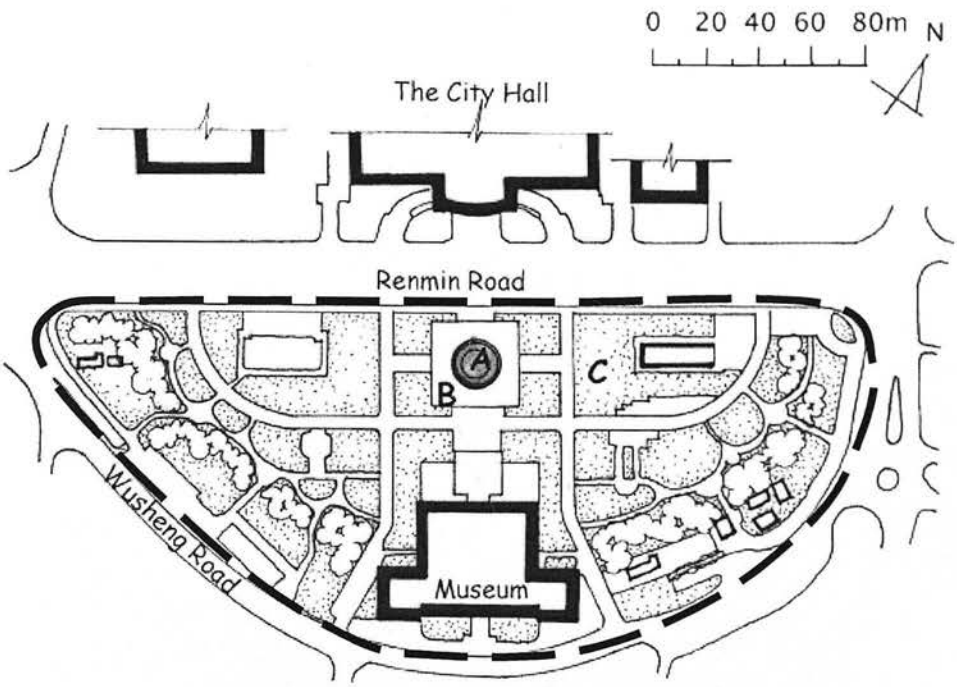
The square is a semicircle of 9 hectares, with a radius of 145 metres, sited in the heart of the city centre and in front of the City Hall. All surrounding buildings are separated by main traffic roads except the Museum of Shanghai, the only building with a direct relationship to the square (figure 3.03). To the north, there are several public buildings, the Shanghai Urban Planning Exhibition Hall, the Shanghai Art Museum and the Shanghai Theatre and the People's Park. The square connects a main shopping street to business buildings crowded other sides.

The People's Square was considered as "the heart of Shanghai, the centre of polity, culture, traffic and commerce" (Zhou 1998) when it was taken into the redesign and rebuilding project in 1994. Originally, the People's Square was a part of Shanghai Racecourse. In 1954 it was transformed into a public open space and soon became a place for mass rallies or celebration events. It was used to gather a million people during the Cultural Revolution Period. It became ignored in utilisation and maintenance in the late 1970s and 1980s. As there was no master plan for rebuilding the square, there appeared a hundred constructions of different sizes and forms dispersed without clear order over the square. Such situation was changed in 1994, when the rebuilt project became one of central projects for 'Big Changes in Three Years', the plan of the Shanghai Government.

The re-design principle of the People's Square in Shanghai has been set up according to the appeals that 'human beings coexist with nature' and developing 'ecological city', both of which are rooted in the pattern of the city. These intentions suggest two approaches: first, transferring the political assembly square dominated by hard paving into the modern landscaped square dominated by green materials; second, creating the characteristic of the modern age and giving the square the position of the feature and symbol of Shanghai.

Description

Green materials (lawns, shrubs and trees) of the rebuilt square were increased from 20 percent of the rebuilt square to cover 70 percent. An evergreen tree belt 40-60m wide shades existing constructions and unifies the main traffic road and surrounding environment. Hard paving paths provide the space off the lawns for strolling and



A: Fountain
B: The central plaza
C: Lawns

Figure 3.03 Site plan of The People's Square, Shanghai

resting, which satisfies the requirement that people should normally keep off the grass for the necessity of maintenance. The main paths, each 9m wide, divide the square into six parts. In the centre between the City Hall and the Museum is a central plaza.

The central plaza, called 'The light of Pu River', is a sunken circle of 16m diameter sited in the centre of an octagonal pattern. Its lowest surface is decorated with a map of Shanghai and beneath is a jet fountain with concealed sprinkler heads and speakers playing music. The steps around it are embellished with a group of reliefs illustrating the history and culture of Shanghai. When the fountain is idle, the map platform is an interesting place to find your orientation and enjoy a plaza concert. It is charming at

night: red, yellow and blue rings of light make the plumes of water glow and sparkle, bringing mysterious colours and magic light to the square (figure 3.03.1).

Analysis

Figure 3.03.1 Surrounded by modern buildings, the square has a heavy modernist flavour. When the fountain is out of operation, its bottom is revealed a structure like a local map, and it is here that music concerts are often held.
(Source: Urban Plaza II, 16)

The design of the square has been awarded the first class prize by the Shanghai government and the square has been chosen through public appraisal as one of ten new attractions of Shanghai. The designer, analysing the reasons for success, deems that the square functions as a link connecting the City Hall, the Museum and People's Park into a line, unifying the area into a whole between Nanjing Road (a famous commercial district) and Wusheng Road and hence efficiently ordering the wider urban open space. The orientation in the design of the square is embodied in its spatial organisation and greenery. Relevant historic and cultural sources materials are displayed in artistic language and form to illustrate the characteristics of Shanghai.

The flavour of the ages is represented in the form of the combination and application of fountain, illumination and concert music. He also describes the shapes the design could not avoid which concentrate on two aspects. One is the lawn area that is bounded by previous conditions and exists as many small patches, not as a whole, which fragments any unity of effect. Another is the site selection of the Museum of Shanghai which is inappropriate as it break the unity of the semicircle square (Zhou 1998).

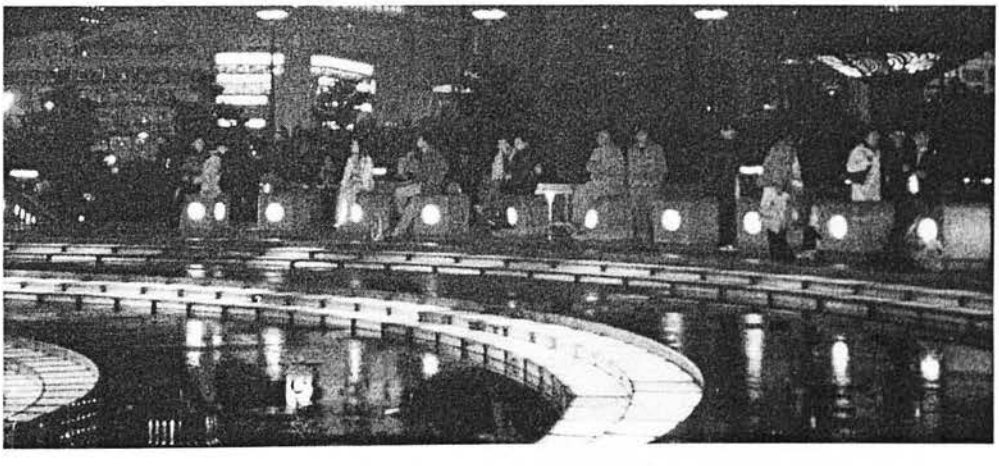


Figure 3.03.2 People prefer to sit on granite bollards around the fountain not the polished granite chairs. (Source: the author September 2002 & February 2003)

However, there is scant information about the utilisation of this square. According to the observation of the author (on 18 September 2002 and on 16 February 2003), compared with the busy vehicle routes around it and the over-crowded Nanjing Road, the square had few people in it and seemed under used. In the mornings, elders took

exercises there and at night there were younger couples strolling. The polished granite benches were rarely used but people seemed fond of sitting on granite blocks around the sunken fountain, especially at night (figure 3.03.2). The edifice entered from here presents the open space with a windowless façade of granite on all four sides, expressing rejection to people (figure 3.03.3). A single snack booth hides in a corner, not easy to discover. The people in the square who were approached by the author stated that they could feel "the modern Shanghai developing" from viewing the panorama of the surrounding buildings but also felt "themselves very small". Such negative feelings will probably only be enhanced by the further development of the surrounding buildings which have been controlled under the principle of the district

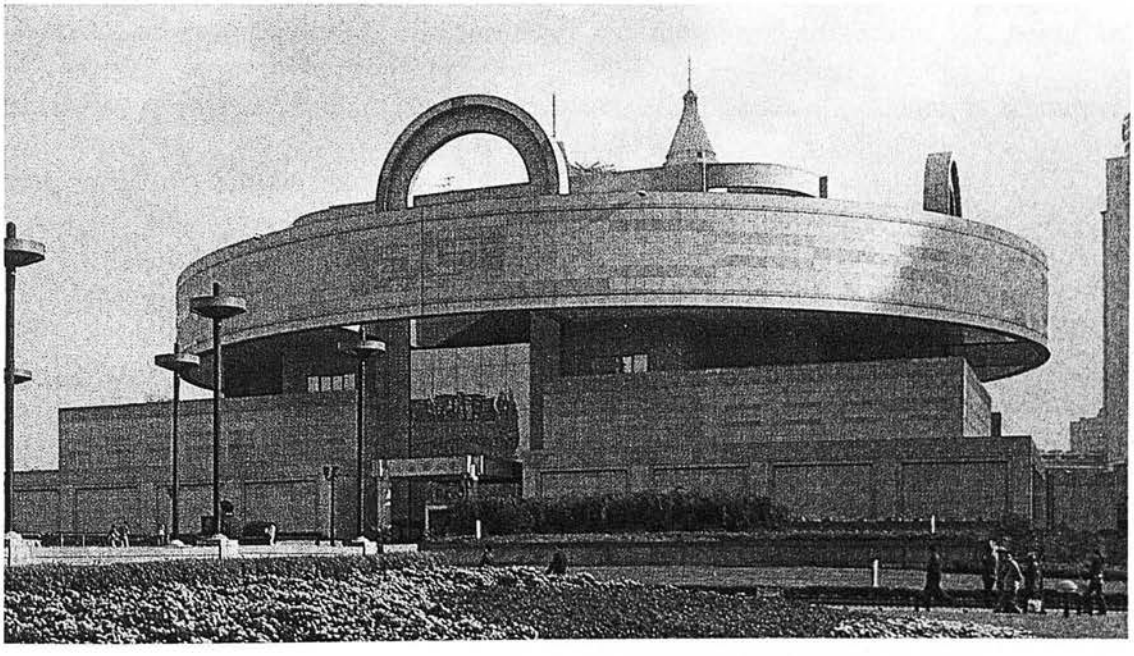


Figure 3.03.3 The only building sited in the People's Square with hard and impersonal walls. There is no transitional space between indoor and outdoor.
(Source: Urban Square II 17)

plan, the closer ones being lower and further ones being higher, which aims to "make more buildings share the open space, enhance the visual sensation of openness and increase visual effect of buildings at various levels" (Shi *et al.* 2001: 5).

3.1.2 **The People's Square** in Dalian

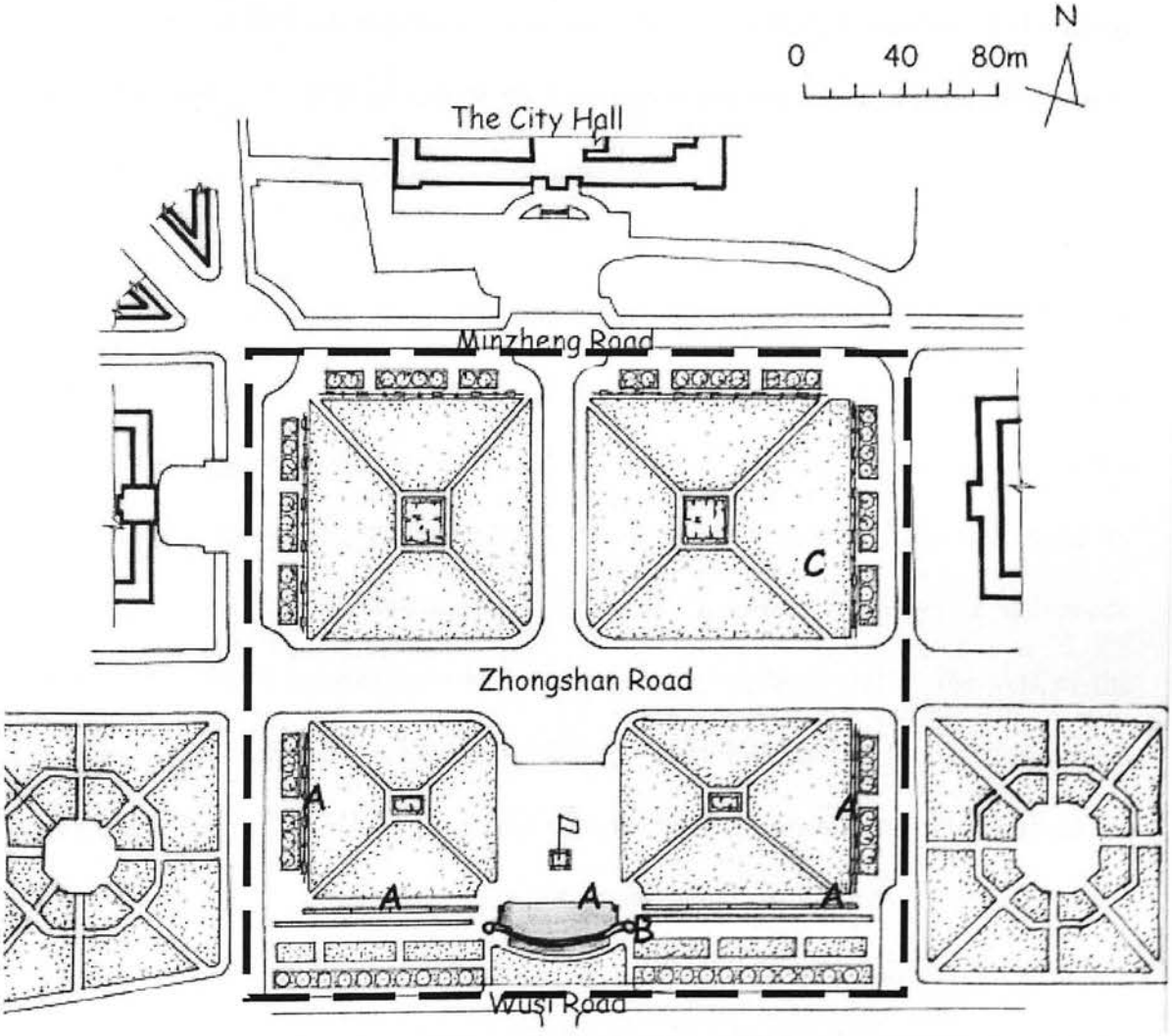
Location and context

Dalian is a large sprawling city on the Yellow Sea. It is one of the most prosperous and cosmopolitan cities in China, partly because it has changed hands so often; as the only ice-free port in the region it was eagerly sought after by the foreign powers who held sway over China in the nineteenth century. Therefore, the city has become one of several which had plazas incorporated in their urban spatial structure before the founding of New China. Colourful trams, diverse architecture and leisurely plazas with acres of grass and lawns keep its connection to history. Since the 1990s, a dozen urban squares have been renovated and built in Dalian but here two of them are involved as case studies; Zhongshan Square is introduced in section 3.2, being an assembly and dispersal hub. The first analysed, being a thematic square, is the larger one, the People's Square.

The People's Square was designed in 1919 and had been called 'The Elders Square'. After liberation, it was renamed 'The Stalin Square' and a monument erected in the southern part for memorialising the soldiers from the Pre-Soviet Union who lost their lives in the liberation of Dalian from the War of Resistance Against Japan and it became the main place for large scale political rallies and mass activities, a scale reflected in the neighbouring building used by local government. Later, in the 1980s, the square was given it current name and since then has been gradually rebuilt.

The square is a rectangle in shape, 285m long, 280m in width and 8 hectares in total. It is surrounded by traffic roads on four sides and cut into two parts by a main traffic

road. In effect, the square is just as three isolated islands separated by traffic routes, as shown in the site plan (figure 3.04). The square was bounded by four or five storey buildings originally, the City Hall on the north and the Court Hall and the Public Security Bureau respectively on the west and east side. The arrival of new high-rise buildings, to a certain extent, has enhanced its spatial enclosure.



A: Fountain
B: The Colonnade
C: Lawns

Figure 3.04 Site plan of the People's Square, Dalian

Description

The first influential step of rebuilding took place in 1992 and made the square the first one to be planted with evergreen grass on a large scale in the north of China. "Look ahead; a scene of greenness meets the eye every side, (the square) gives a striking impression", thus the designers described their project (Liu *et al.* 1998). For emphasising its unified colour and enriching the public's appreciation of greenness, lawns were extended up to the buildings around; low evergreen shrubs took the place of 2 metre high hedges, and the field of vision became widened over the whole square from between tree walls. Flocks of pigeons gather one moment and disperse the next, bringing a lot of natural charm and vitality.

The second significant step took place in 1999, focused on the renovation of structures and with a view to creating water features. The whole kept the original symmetrical pattern but the Monument of Martyrs was moved out, intact, to the Cemetery of Soviet Martyrs and 24,500 square metres of granite stone were used for paving paths. To echo the context of locally historical buildings, a colonnade designed in the European-style was erected at the southern end of the axis of the square, which had been previously dominated by the City Hall. A flag platform and a cascade fountain 70.8m long combined with the colonnade were added to enhance the axis. Along the same side two 84m long cascade-fountains respectively were arranged on the two wings of the central fountain. Jet fountains with concealed sprinkler heads bound the other three sides. The green square was upgraded to a water-view square and "has become a new spot of sightseeing" (Shi *et al.* 2001: 53).

Analysis

The designers noticed that "the square was huge in scale but without a beautiful appearance and facilities for people taking a rest" (Liu *et al.* 1998). The appearance is arguably more beautiful than before in terms of extended green lawns and the grandeur of the fountains, but the facilities for people taking a rest seem very little. The two gardens of modest scale at the corners are the places most visited people; they are also the main passing way to cross the square and where people could sit on the edges of flower terraces (figure 3.04.1).

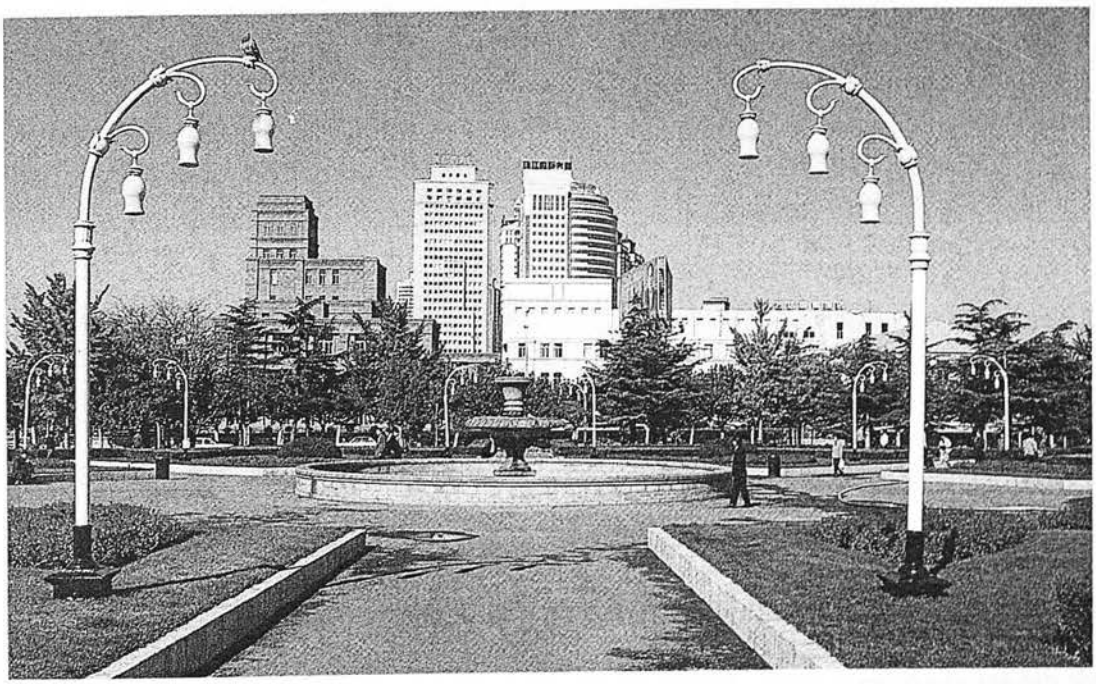


Figure 3.04.1 The design seems only for passing people's appreciation as the edges of flower terrace are the main facilities for sitting.
(Source: Urban Square I, 57)

The main body of the huge square looks monumental and splendid, especially with the spurting water, but as no seats are provided and people are ordered to stay off the huge lawns, the users could be said be those who pass through in their automobiles (figure 3.04.2), as it is these people who can appreciate the large green expanses in a second. The huge square is appropriate for appreciation but not for public leisure.

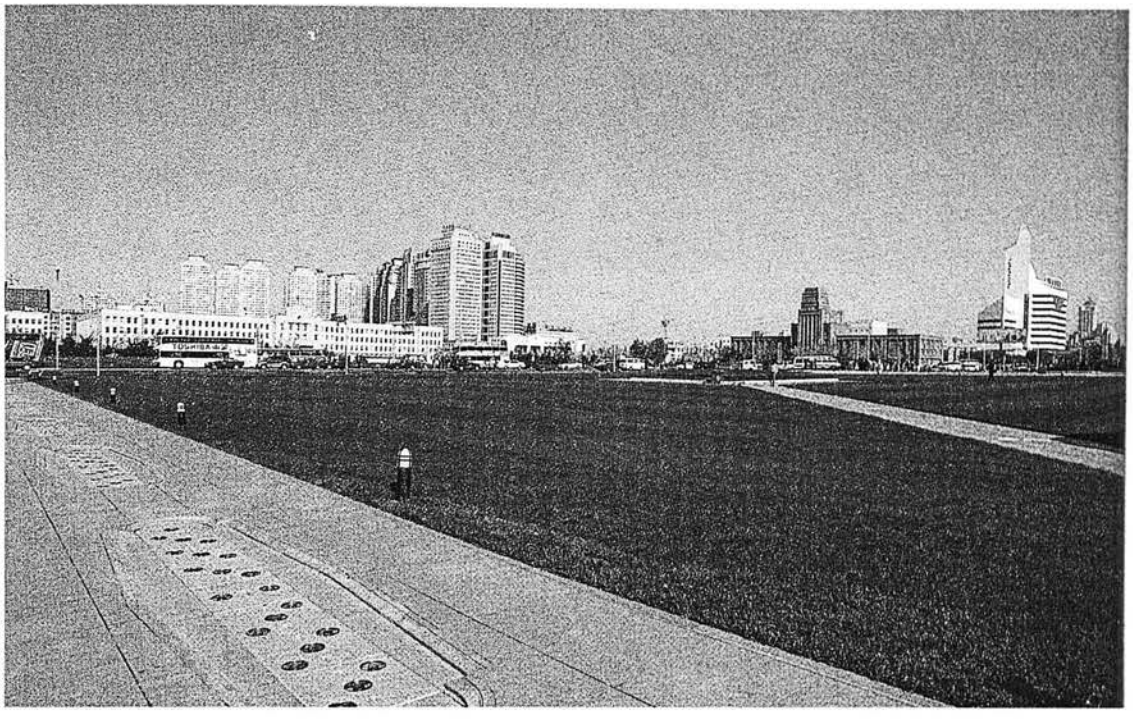


Figure 3.04.2 People are supposed to keep off the huge area of lawns.
(Source: Urban Square I 55)

The designers realised the phenomenon of lack of use by citizens and provided some suggestions for entertainment or commercial facilities, such as cinema, supermarket, coffee shop and restaurants that could attract people and meanwhile reduce the possibility of having many structures at the ground level. They accentuate taking the human being as the measure of scale but only focus on the height of buildings, arguing that to change all high-rise buildings would make people feel if they are at the bottom of a well. They recommend that the height of buildings should gradually increase away from the square in order to enhance the sensation of openness and avoid such a feeling (Liu *et al.* 1998). They do not mention the relation of human scale in terms of width and length. These comments indicate that the designers take the square as a two-dimensional place but not a whole in urban context and put more emphasis on architectural elements than on the need of users.

3.1.3 **The Civic Square** in Jiangyin

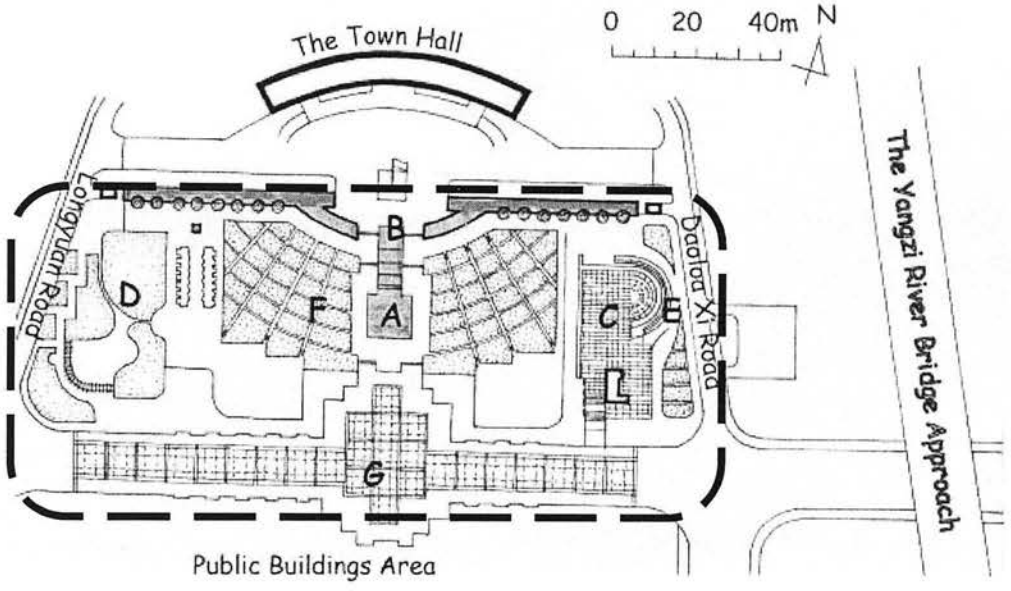
Location and context

Jiangyin, located on the south bank of the Yangtze River, is a newly developed county-level town with two hundred thousand people under the jurisdiction of Wuxi in Jiangsu Province. The Civic Square is located in the centre of the new developed district, dominated by the Town Hall on the northern side. Traffic roads separate the square from its surrounding buildings on the other three sides. On the southern part between residential buildings and the square, the land is temporarily covered by lawns where a group of public buildings, for general use, is planned. On the west side is a dwelling area and a bridge approach runs through its east side to cross the Yangzi River.

Description

The design divides the trapezium-shaped, 4.2 hectares area into four units. The axis crosses the middle of the square, and comprises a flagpole, fountain pond, thematic sculpture and main entrance; and a grid pattern of lawns gives a backdrop on ground level. In contrast to the symmetric centre, two subsections on the east and the west are more informal in layout and show greater consideration for people's activities (figure 3.05). Hard materials mainly cover the eastern sunken plaza and the surrounding low wall decorated by relief, which illustrate famous events and persons related to local history. The western part employs lawns and deciduous trees to provide comfortable conditions for sitting and chatting. Colourful paving embellishes the traffic road along the southern

edge so as to enlarge the main entrance area and weaken the deadening effect of the traffic road which cut the whole public space into northern and southern parts.



A: Fountain
B: Cascade
C: The sunken plaza
D: Chatting area
E: The relief wall
F: Lawns
G: Colourful hard paving
Figure 3.05 Site plan of the Civic Square, Jiangyin

Analysis

Acknowledging the difficulty of spatial organisation as the site is long from east to west and narrow from north to south, the designers sub-divided the contents and layout of the square in order to "create multi-function, multi-level, multi-scene and multi-interest" public space and repeatedly accentuated "spatial openness" (Chen & Wang 1999: 32), yet they have ignored the basic point of the square which is a three-dimension space, its openness is relative and its measure of scale is the human body. Though three juxtaposed

units have individual scales, under the principle of openness without real spatial division, they only exist in plan or from a high-level view (figure 3.05.1).

Figure 3.05.1 It is difficult to display the attraction of elaborate designs in such a vast space. The pattern can only be viewed from the height of a nearby building.
(Source: Urban Square I, 115)

3.1.4 **The Dragon Square** in Shenzhen

Location and context

Shenzhen is perhaps the rapidest developing city in the nation. As the location of the neighbour of Hong Kong, it has been taken as the frontier of modern development in the

country. During only twenty years it has developed from a small village to a city of two million people. High-rise buildings have quickly come to dominate its urban landscape and the lack of public open space among high-rises was soon evident. In the new development of its districts, Shenzheng has put emphasis on changing this situation. The Dragon Square was constructed under such a background.

The Dragon Square is a main public space of the new Longgang district which combines factories and residential buildings. The site was originally 12.6 hectares of grassland. It is intended to be the activity centre of Longgang District, providing for culture, entertainment and relaxation. It lies on the main axis of the district centre, from the Civic Hall, and extends 499 metres to the south, ending at Chenhui highway on the ground and in space by a skyscraper which is planned to be a symbolic building of this area. It is 210 metres from east to west and will be bordered by the public buildings of museum, library and exhibition hall. When the square came into shape in 1997 only the District Hall stood beside it; the other surrounding buildings only exist in plans (Shi *et al.* 2001: 87).

Description

The layout of the square is a symmetrical axis pattern subdivided into four units (figure 3.06). The Civic plaza, mainly used for rallies and celebrations, faces the District Hall. Total 5500 m^2 is covered by hard paving, a long pond with fountains lies in its middle and rows of flagpoles on the sides.

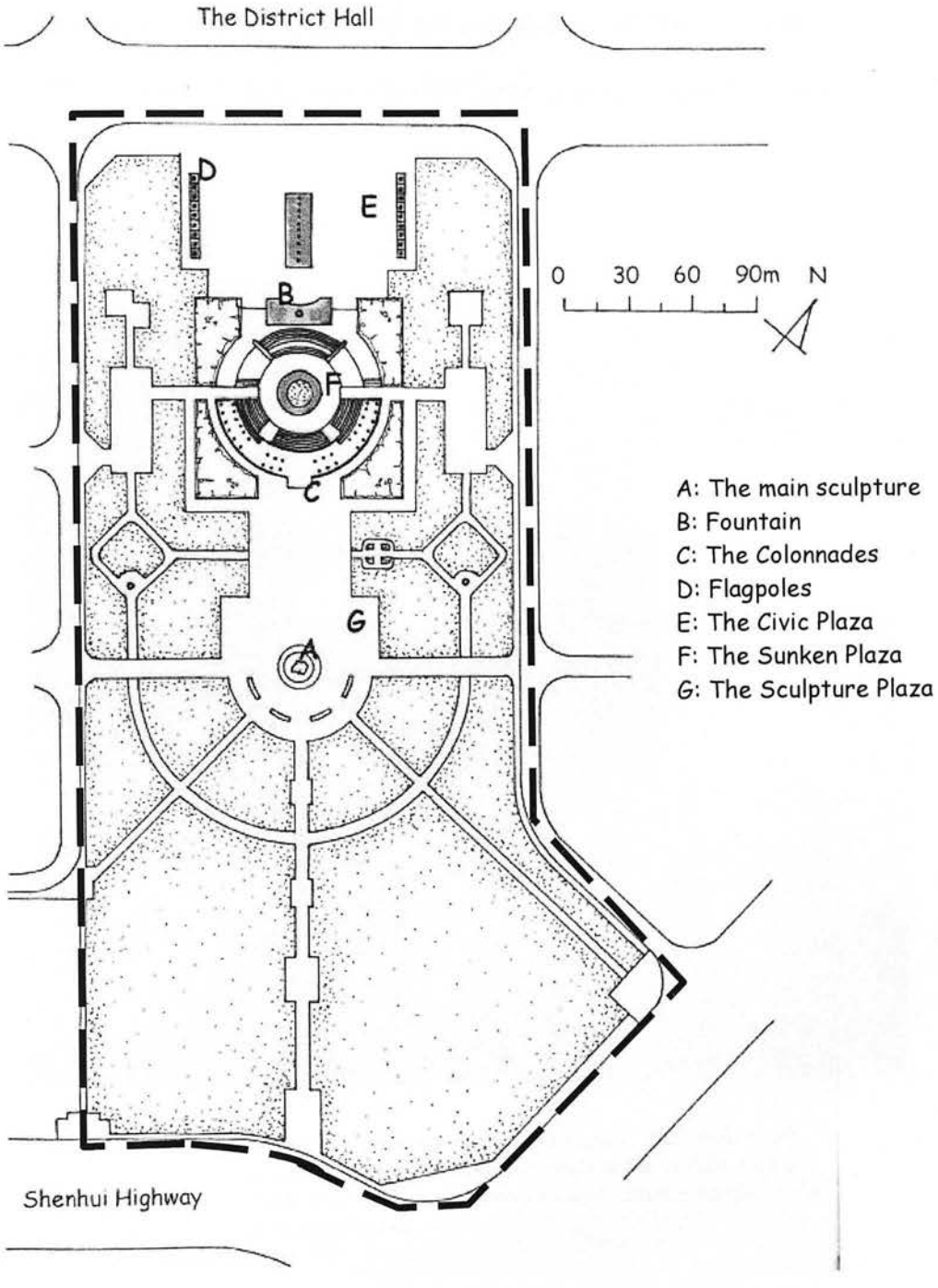


Figure 3.06 Site plan of the Dragon Square, Shenzhen

The Music Plaza is actually a circular platform elevated outside and sunken inside. Colonnades on its perimeter platform are intended to enhance vertical extension and visual effect (figure 3.06.1) and circular steps provide seats for people watching

Figure 3.06.1 The sunken plaza provides a subdivided space. The circle of 80 metres perimeter provides independent spatial enclosure in the middle area of the square. The manmade structures, steps, corridors and columns reinforce the spatial enclosure and dramatic scene.
Source: Urban Square II: 95)

performances on the central stage. The Sculpture Plaza is intended for the use of large scale performances with a total of 6600 m² hard surface. At its centre stands the statue

called 'the Root of the Dragon', at the end point of the axis, forming a series of scenic spots along the main axis together with ponds, fountains and cascades in other subspaces. Lawns as the fourth unit cover a large area of the southern part and enclose the hard surfaces of the east and west side, where some furniture has been arranged for people's convenience.

Analysis

In 1998 the square was awarded the second prize of urban planning and design by the Ministry of Construction and obtained the title of one of the "Ten Finest Urban Squares". It is indeed enjoyed by labourers and citizens living around, according to Xiang-yu Wang, a local urban designer who accompanied the author during a site visit in February 2003. He further commented that the fact that many people use it might only indicate that people need public space but not that it is a better design.

The designers have sought to make the huge open space full of contents and meaning but it is difficult to catch its expression on account of its monumental scale. Its size, 210m wide and 490m long, distinguishes it as a two-dimensional space even if the planned enclosing buildings were to be built, and even if there are structures employed in the middle to interrupt its plain landform features. Figure 3.06.2 shows how, in the vast space, the elaborately designed structures become vague and diminished in the void. The sculpture, more than 20 metres high, is the only visible structure in the square, but it is too isolated as there is nothing surrounding that can echo it. The lack of intimate sense is expressed clearly by the picture. The repetition of pattern and function of the three plazas

is a direct consequence of designers needing to find ways to replenish and beautify the space. Although the elaborately designed colonnades might have artistic value in and of themselves, they can only be appreciated when visitors close to them.

Figure 3.06.2 A view from the south entrance of the urban square
It is difficult to imagine spatial enclosure in this square. The contrast between the Chinese character (the name of the square) and the man behind the stone indicates this is a space designed for grandeur and monumental expression.
(Source: Urban Square II: 94)

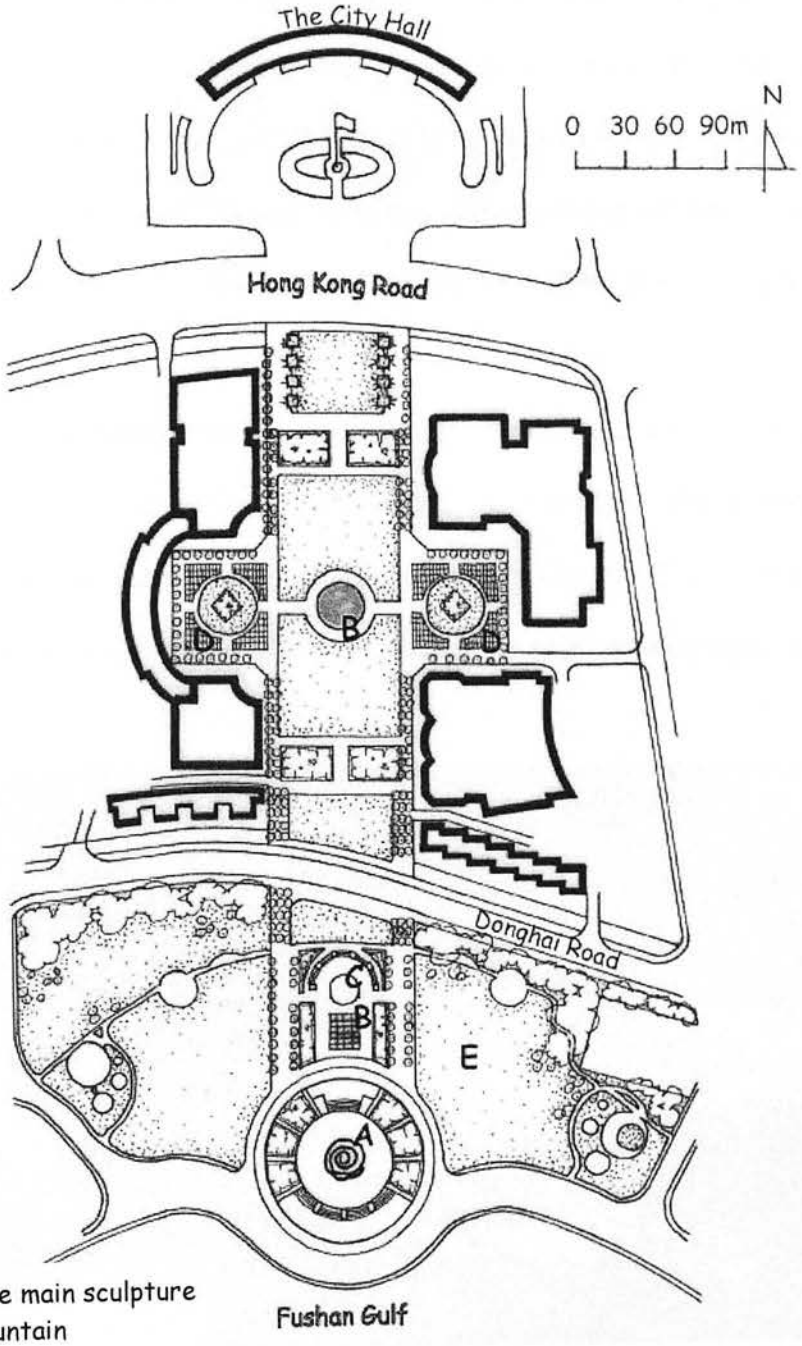
3.15 **May 4th Square** in Qingdao

Location and context

Qingdao lies at the southern tip of the Shandong Peninsula in eastern China. It is on the coast and derives its character from nearby hills and the ocean. It is the second largest container port in the nation, one of the commercial cores as well as a hub for tourism. Originally it was a small fishing village but was set up for coastal defence in 1891 by the Qing Dynasty (1644-1911). Later on, it became a German concession for more than seventeen years, until 1914 and the cityscape was influenced by the West. The old town area, as described by Janet Kealey (the editor of *the China-Britain Trade Review Journal*) "is less of northern Europe and more reminiscent of the Mediterranean, especially in bright autumn sunshine, with the buildings painted a warm shade of yellow" (Kealey 2002: 11). The newly developed business district took shape with a high-rise configuration around 1996, totally differing from Qingdao's traditional shape.

The May 4th Square is sited in the new developed district along Fushan Bay. It is the most important component of the Donghai Road Environment Project, which aimed at unifying and beautifying the eastern seashore area. The name of the square is in order to commemorate the May 4th Movement in 1919, an event significant to the nation as well as to Qingdao. As the landscape setting for the City Hall and one of the main public spaces of new district, it was supposed to be a showcase and a new symbol of Qingdao.

Description



A: The main sculpture
B: Fountain
C: The stage
D: Shade plaza
E: Lawns

Figure 3.07 Site plan of May 4th Square, Qingdao

The square is a semi-enclosed and open-ended square, with the City Hall behind and the sea to the front. In total area, 10 hectares are separated by traffic roads into two halves (figure 3.07). The northern part is hemmed in by modern buildings. Its main form is as a rectangle 300m long and 90m wide with two lugs projecting east and west in the middle. The southern part is totally open to the bay, and takes all buildings as its background. It is 400m wide and 200m long. According to the behaviour of the users, the northern part is considered as a passing path, creating a neat, elegant, pleasant atmosphere in design, while the southern part is considered as an activity centre, providing a place where people can enjoy the sea breezes and appreciate the scenery (figure 3.07.1). Although the design emphasises the differences in the two parts, as a whole, the continuity and the unity is

Figure3.07.1. A bird's-eye view of the southern part of May 4th Square
(Source: Fine Designs of Landscape Architecture in China, 18)

conspicuously represented as well.

Ginkgo trees planted in ranks along the buildings cross Donghai Road, highlighting the main axis from north to south. Green lawns link the northern part to the southern part, expanding towards the east and west side along Donghai Road, which is bordered by a belt of mixed trees blocking the traffic flow and noise from the open seashore spaces. Red and grey granite pavements and kerbside flowerbeds celebrate the special character of local stone. The main axis strings together fountains spouting into Fushan Bay, from a pine-tree-style water jet in the northern part, to a water-phalanx along the ground level in the southern part culminating in a 100m high seawater jet fountain in the sea. In the intervals between the fountains, a huge granite stone engraved with a poem by Yi Chen in Chinese calligraphy record the history of Qingdao at the northern end of the axis. The most striking structure in the square is the huge steel sculpture called 'The Wind of May' sited on the crossing of the main axis and the path along the line of the seashore. The sculpture is about 30m high, 27m wide in diameter and weights 700 tons. Its flaming red colour and spiral form sets up a dramatic contrast with nearby buildings and makes sense with the modern style district within which it stands. As the winning entry in a design competition it was voted as 'outstanding' by all commenting groups, citizens, experts and officers. Therefore, it was familiar to many citizens even before it took real shape.

Figure 3.07.2 A normal weekend day in May 4th Square
(Source: the author October 2002)

Jet fountain changeable water features attract people's attention.

The railings along sea dam and the edges of flowerbeds become popular places to stop and rest.

The little boy's concentration quietly indicates that children have their particular interests which might surprise some but undoubtedly bring a lovely sense to the place.

Various groups gather in this open space, old and young, females and males, individuals, families or groups of friends.

Analysis

As soon as the May 4th Square, together with the Wind of May sculpture, appeared in 1997, it became a popular public place and activity centre (figure 3.07.2). The southern part is always full of people, especially in weekends and national holidays. Various performances held by professionals or amateurs on the stage, the synchronised display of the fountains and even fishermen along the shore attract lots of watchers. People stroll around, sit on granite benches, chat or laugh or stop to take pictures; children fly kites, play in the water or chase each other; bicycle riders occasionally cycle through and vendors walk around selling small articles. Compared with the bustling noise and excitement confined to the hard paving area, the three quarters of the area covered by lawns is very quiet and empty as people have to keep off the grass and, although benches are arranged along a path going through, they are seldom used. When the author noticed this phenomenon and made interviews with visitors on the 2nd and 5th October 2001, most interviewees deemed the untouchable evergreen lawns generally acceptable (this is discussed further in Chapter 4). The people preferred to stay in the middle area, not on the lawns where nothing is very interesting and only four or five claimed that they would like to have a rest on the benches where it is quiet and relaxing. The designers explain, actually, this is supposed to happen as they were designed as rest areas and no artistic work was thought suitable for the site. Unfortunately, the empty lawns are only huge areas with no sense of human intimacy (figure 3.07.3).

In the northern part, the shade of deciduous trees attracts more and more people sitting on square benches in the two squares adjoining the place and along the edges of grass terrains. The surrounding buildings started to change from private to public service use,

Figure 3.07.3 The huge lawn is very lonely, compared with Princes Street Garden in Edinburgh; there is lack of something.
(Source: the author, October 2002, Qingdao & August 1999, Edinburgh)

serving as tea bars or shops, making the square more amenable and lively. However, the two flower terraces of 25m diameter leave little space for people's activities and also limit the flexibility of the spaces. Perhaps the designers had Bernini's achievement in St. Peter's Square in Rome in mind, aiming for the potential condition that the secondary-axis crossing the long main axis offered a real chance to create two pockets space in the sense of 'arrested movement' (Zucker 1966: 145). This would make the two spaces come closer to a typical square in terms of three-dimensional enclosure (figure 3.07.4).

Figure 3.07.4. A night view of eastern part of May 4th Square shows a modest scale space with building enclosure.
(Source: the author 1999)

The Square was nominated in a survey (described in Chapter 4) as the best place to go and visit and was also cherished as the new symbol of Qingdao by citizens. The Ministry of Construction awarded it as the first design prize in 2000. Although some interviewees complained that the square should be bigger, almost all mentioned that, when they want to celebrate something, they go to the May 4th Square spontaneously, and they have done this many times. Moreover, the square is the first place of choice for various social activities such as social investigation, policy propagation and so on. It is the most popular meeting place (for the results of the survey in detail, see Chapter 4).

The May 4th Square is the only one covered in this chapter that has buildings standing directly on its borders, acting as a part of the square rather than being separated by traffic routes. But the surrounding buildings are not for public use, perhaps because the new district in an initial stage of development, urgently need funds, and its developers have the power of decision on the land use. This also indicates that the understanding of this

form of urban space in urban design and square design is limited to a two-dimension concept.

3.1.6 **The Huiquan Square** in Qingdao

Location and context

The Huiquan Square is in different predicament to the May 4th Square. It has rapidly become ignored by citizens. It is sited at the junction of the old and the eastern new district, the transitional area between Zhongshan Park and the main bathing beach. A main traffic road bisects its 12 hectares area into south and north parts. The southern part is in front of the Civic Gymnasium and adjacent to the Civic Stadium and bus terminal station. The northern part joins into the green groves of Zhongshan Park with the hills behind.

Originally Huiquan Square was built as a racecourse in the early twentieth century. During the Cultural Revolution, it was the place for mass rallies. It was the largest public space without a systematic design being simply covered by indigenous lawns before 1992. It was the favourite place for football players from all the corners of the city, and brought out the flavour of human life and vitality to the square. Aiming to provide a modern space for people's leisure time and to commemorate the centenary year of the city's establishment, in 1992 the government decided to rebuild the southern part of Huiquan Square and to re-plant the evergreen (non-indigenous) grass in the northern part (Qingdao Cultural and Historical Information Committee 2000: 200, 203). The square

was full of vitality contributed by younger sports fans before being rebuilt and in the first two years after renovation it was bustling over a short period since it was the main venue for the Tsingtao Beer Festival, but then very soon it became ignored by citizens although it is neighboured by the Civic Gymnasium and adjacent to the Civic Stadium and bus terminal station.

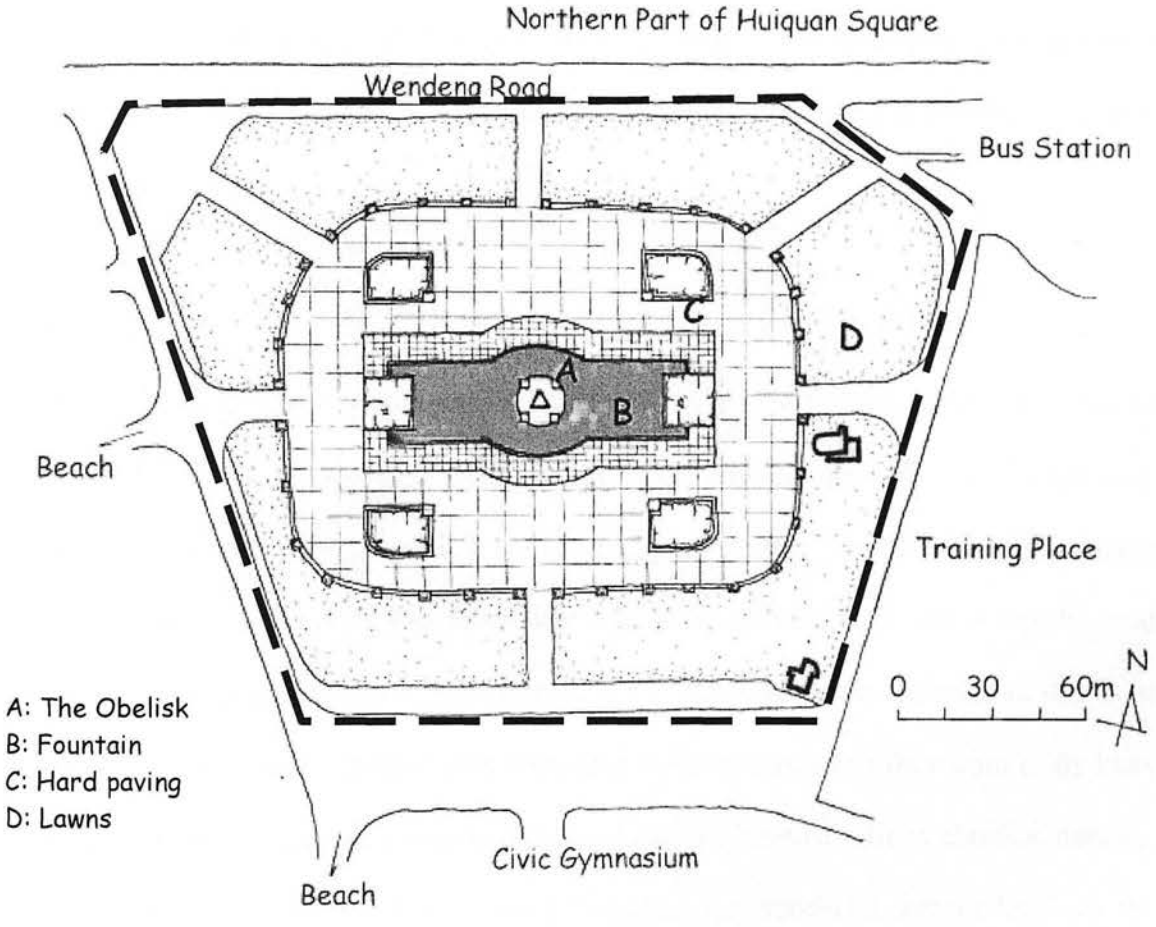


Figure 3.08 Site plan of Huiquan Square (southern part), Qingdao

Description

The south part is about 5.5 hectares and has been laid out in three concentric rings (figure 3.08). In the middle is a fountain pond one hundred metre long with a glass obelisk 36.5m tall in its central point. Hard paving covers the second ring and the third ring is a lawn terrace. There are many symbolic gestures in the square, such as the length of the pond, intended to memorialise the city being hundred years old and the height of the glass obelisk, indicating that the city develops forward every day of the year, but not only has it not become a new symbol of the city, citizens' attitudes in a survey of their perception to public open space in Qingdao (described in Chapter 4) indicates it is not rated as a nice place either.

Analysis

As the exotic evergreen lawns replaced lawns of indigenous grasses, people have had to keep off those lawns for maintenance reasons, meaning that the parts used by the only true group of enthusiastic users, the football players, lost their place in social life. A large hard pavement and totally exposed space without any protective screen, swept by cold winds in winter and scalded by hot sunshine in summer, dispels any intention to stay in or even go to the square. Children only remember to come here when they want to fly kites in early spring. No dancers (many middle-aged citizens habitually enjoy classical dancing after dinner) come to this distant square "enjoying the wonderful surrounding", as the designer envisioned. A small market has been refused permission to occupy this square for being at odds with the theme of the square. The designer explains that because the fountain rarely works, the square has lost its attraction. This may be relevant but is not the essential issue. Huiquan Square might not be a good example as a design project, but

it is a good example to illustrate the emphases that designers placed in urban square design and their understanding of the basic attributes of an urban square.

First of all, the re-design of Huiquan Square did not relate to the urban context. The area it is sited in is not a dense residential district that might be a source of regular visitors. To be a meeting place or activity centre, the square should benefit from its only advantages, which are that the most beautiful seashore of the city is only several hundreds metres away in front, and that it is the largest park of the city lying beside Taiping hill. The only original activity in the place has been totally abandoned and the area that has gradually taken shape as a sports activity area includes indoor and outdoor sports centres, thanks to the Civic Gymnasium and the Civic Stadium. Secondly, for the sake of 'symbolic' proposals (which the key designer introduced in 1992), the re-design swept away the familiar memory and feeling of citizens and imposed structures without coherence in the context of the city and a fountain composed of thirty cannon-like sprinklers in imitation of that of the Palais De Chaillot in Paris, without consideration of cost and maintenance in local conditions.

The re-design refused to include shady trees (figure 3.08.1) for people to avoid the strong sunshine because of the desire to keep open, unobstructed sight-lines and the fantastic idea that a large hard paving area would invite dwellers to run and congregate here in huge numbers for morning exercise or for after dinner dance groups.

Figure 3.08.1 Trees surround the square but the surface area is mostly hard paving and the sitting areas are without shade.
(Source: the author November 2002)

Several contemporary high buildings, with scant significance in terms of scenery and only loosely related to the square, border the south side and the north part is enclosed by trees. Additionally, the physical border of the square, especially the southern part, vanishes into the void and therefore in fact the space of the square does not register as a phenomenon in three-dimensions. The obelisk (figure 3.08.2) although erected in the centre within the physical border of the square, is not powerful enough to draw together disparate elements psychologically. It is unable to "set up a local contrast with nearby

elements" (Lynch 1963: 78, 79). The choice of glass as a material makes it visually too insubstantial to be the core of a space.

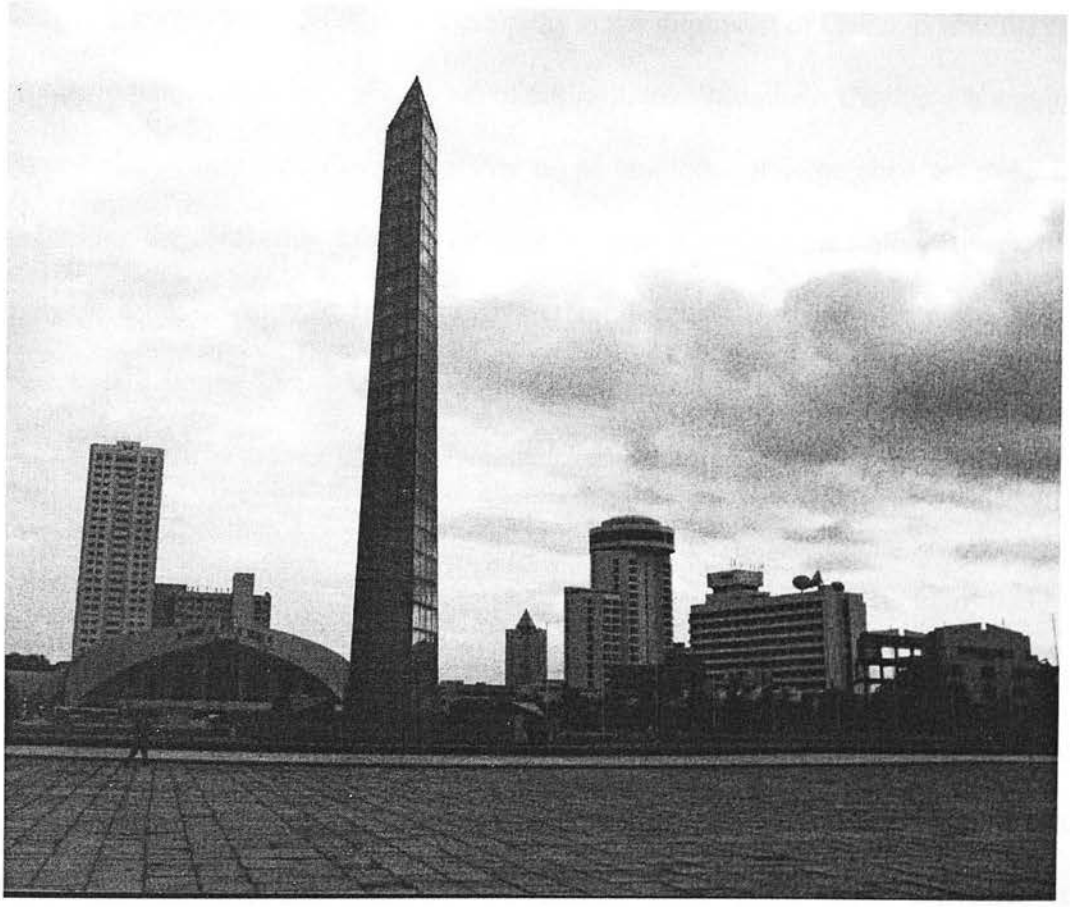


Figure 3.08.2 The glass Tower
(Source: the author November 2002)

The square is neither an contrasting view within the urban pattern nor visible from outside this area. It might be taken as the collective of critical failures. Several of it problems exist in other squares and are discussed above in different degrees of detail in relation to the other squares.

3.1.7 **The People's Square** in Chongqing

Location and context

Chongqing is the important interior metropolis in the southwest of China, is also the most densely populated area with population of 5.8 millions. 'Mountain City' is Chongqing's common name, indicates the particularity of its landform. It is perched on steep hills overlooking the confluence of two rivers (the Yangtze River and the Jialing River). Since it became a municipality in 1994, massive urban development has taken place, and the urban square is one of the most important components to provide a public space for citizens who live in the one of 'four furnaces' (temperature can exceed 40° C in summer) and of this overpopulated city.

The People's Square was built in 1997 with 2.82 hectares in an area neighboured by the City Hall, the Great Meeting Hall and hospital, hotel and residential buildings. A new built traffic road separates it into two sections, one bigger and one smaller in size (figure 3.09). The original site was an unorganised open place with different very topographically varied surface; the highest point was 219.8m elevation and the lowest point was 206.9m above sea level. Only one traffic road ran beside it, walls surrounded all the sides and there were steps connected it up to the Great Meeting Hall. The Great Meeting Hall is a symmetrical building in a traditional Chinese style constructed in 1951, it is the main place for holding conferences and performances over the years and has become "the symbol of the city" (Shi *et al.* 2001: 45). The characteristics of landform and

position provided the chance for the designers to create a three-dimensional space and a 'dominated square' (Zucker 1966: 11).

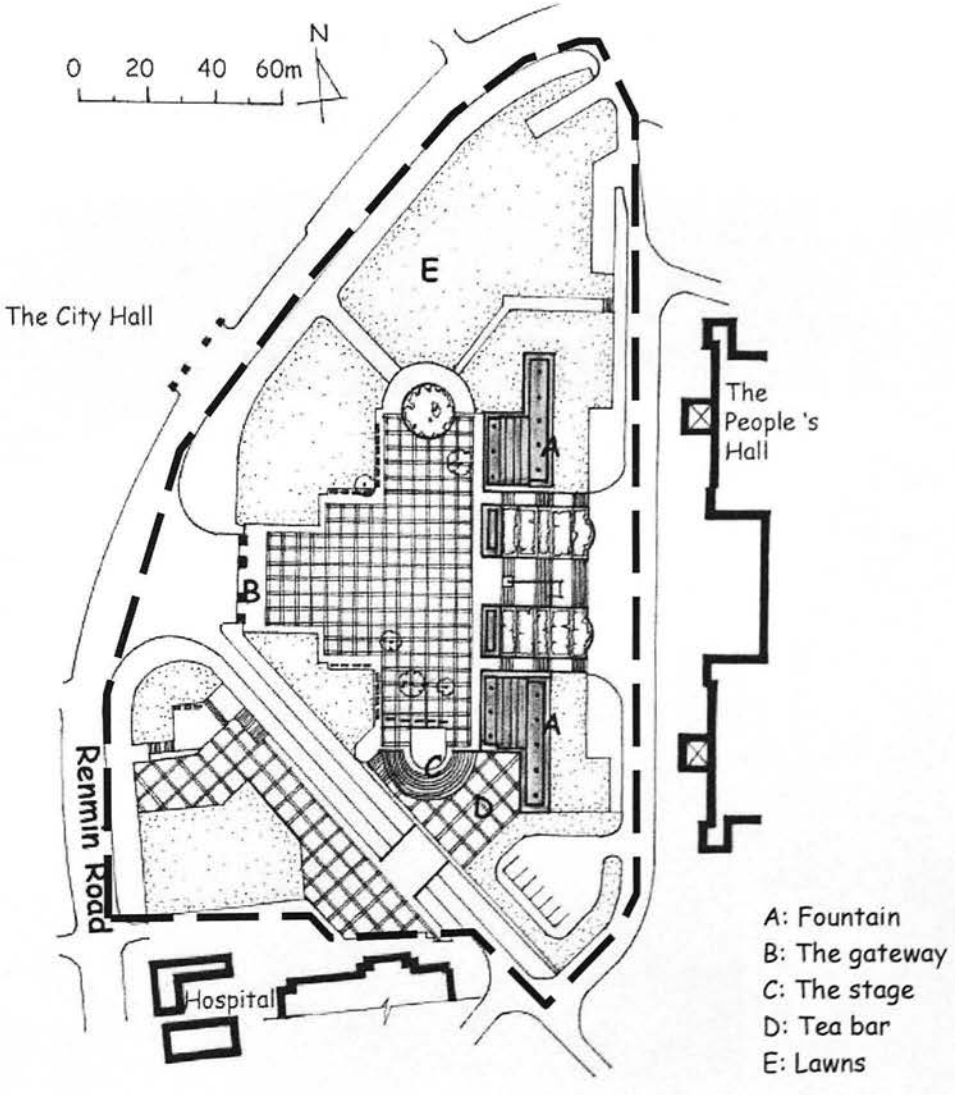


Figure 3.09 Site plan of the People's Square, Chongqing

Description

The layout of the square is aimed at setting off the Great Meeting Hall and hence, enhancing local distinctiveness and satisfies the needs of formal and informal activities (Shi *et al.* 2001: 45). It comprises a central activity ground which sprawls along the axis, pitched lawns, which cover the northern-west side and the stage and tea bar area on the southern side from where the whole square can be viewed. A gateway, a flagpole and the

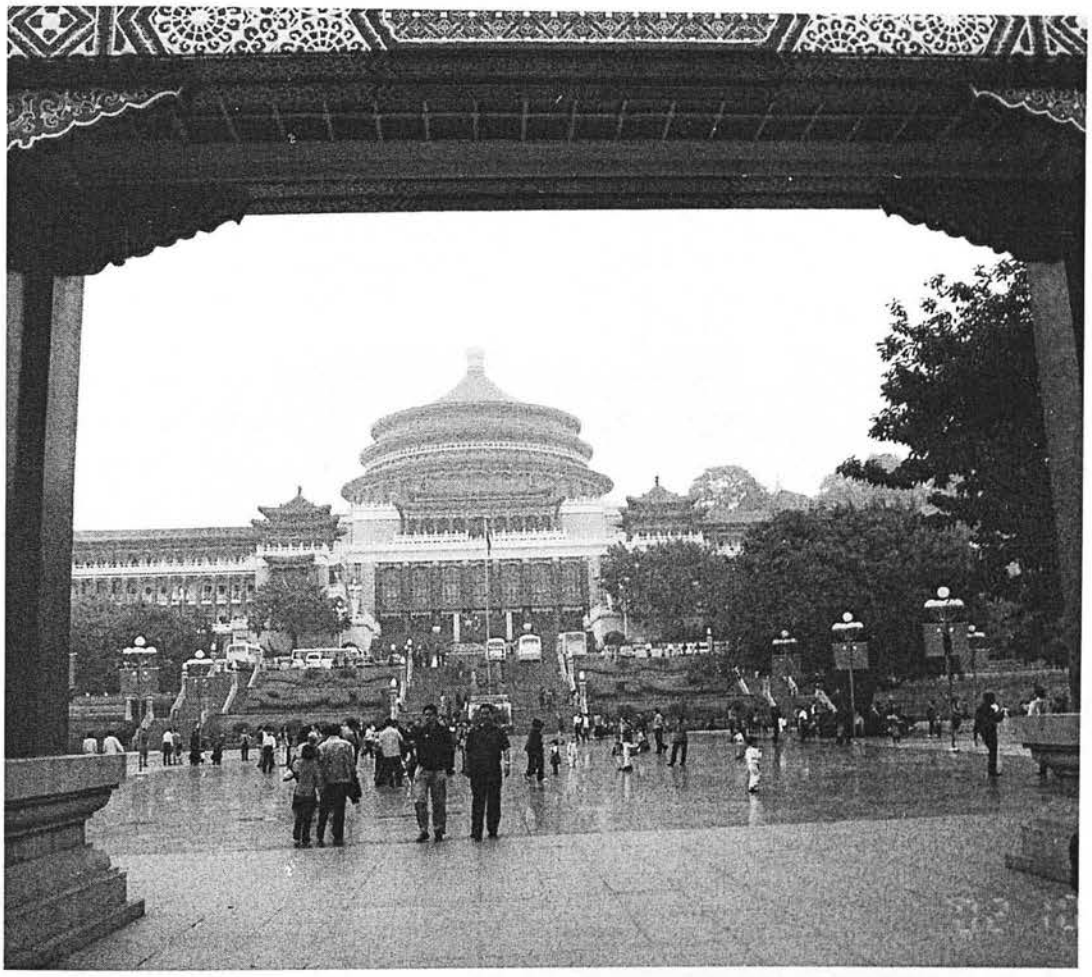


Figure 3.09.1 A view from the main entrance at ground level
The gateway is the main entrance of the square. It echoes the dominant building of the square in architectural style and frames the main feature of the square.
(Source: the author October 2002)

main building set up the axis of the square, which is emphasised by red granite paving on the ground level. The gateway, in the same architectural style as the main building, leads

people from the main traffic road into the open space. As the starting point of the axis, it frames the main view (figure 3.09.1) The flagpole is erected at the junction of the ground paving and the two sets of fountains, cascades and symmetrical flower beds climb up with the steps and become integrated into the view of the background buildings. Several mature broadleaf trees beautify and enrich the space and provide vitality and comfort,

Figure 3.09.2 An overlook of the square standing at the platform in front of the People's Hall
The picture shows an enclosed space and the dramatic unity of the third dimensional elements, surrounding buildings, hills and trees.
(Source: the author October 2002)

benches surround the trees or lie along the edges of lawns, and small shelters and outside tea bars bring a lively atmosphere to the square (figure 3.09.2).

Analysis

The People's square in Chongqing is the most popular and well used square but was the smallest one that the author visited. "Everyday several tens of thousand people spend time there" (Shi *et al.* 2001: 53). The square takes the advantage of the natural landform, creating the sense of spatial enclosure. Additionally, the original trees were carefully preserved, subdivide the space into 'human scale' parcels (figure 3.09.3). Although trees exceed human bodies in size and volume, they are much more comfortable to people than vast space and huge structures because they take on an organic form and soften the space, perhaps giving a clue as to why some designers are unsuccessful in using constructed structures to limit space.

Whether the pastiche of the royal architectural styles of the Ming (1368-1644) and the Qing (1644-1911) Dynasties used in the People's Square truly represents the local characteristic of buildings is still in controversy. The author feels that there is room for refining details of the design and that there was a chance, taking inspiration from, for example Michelangelo, to employ nature-given circumstances to shape more dramatic vistas, but the square stands as a good successful example of modern public space in China in terms of spatial relation and heavy utilisation. It demonstrates that a good square "does not depend on size or scale" (Zucker 1966: 1).

Figure 3.09.3a The pictures show the role of landform in spatial enclosure and organisation. Terrace fountain ponds and the spectator gallery serve to transition the space from the higher level to the lower
(Source: the author, October 2002)

Figure 3.09.3b A tree can be the focus of open space. It not only plays a role in spatial organization and structure but, its incomparable superiority is its nature, alive, soft and intimate, especially in a manmade hard environment.
(Source: the author, October 2002)

Figure 3.09.3c Trees become the medium between surrounding buildings and the floor, softening the hard interface and reducing the negative effect of being beside huge structures in terms of inhuman-scale and impersonal sense.
(Source: the author, October 2002)

3.1.8 Summary

The basic intentions of new built or renewed thematic urban squares, enhancing image and providing for public activity, lead to the creation, at a large scale, of symmetrical patterns, elegant fountains and huge lawns. This shows a slight understanding of the needs of the public and this has direct consequences on utilisation.

3.2 Assembly and dispersal hubs

Assembly and dispersal hubs refer to those squares built for the dispersion of pedestrian and traffic flow. They are often attached to traffic islands and transportation centres such as train stations and long distance bus stations. Most of this kind of square were purely functional places before the 1990s, with simple hard paving covering the ground, and most were used as bus and taxi stations and rarely designed as public sitting or meeting places. More recently, the emphasis has been on embellishment and multi-functional use in design and management. This approach seeks to make such squares into important components of urban open space. The conjunction of function and landscape is the characteristic represented in the change of the assembly and dispersal squares at the present time.

The train station squares in Chinese cities, fully integrated parts of the train stations and traffic organisations, function as the real spaces for gathering people and, in many instances, they are the first or last impressions of the city, particularly of such places as

Shijiazhuang. The Shijiazhuang Railway Station Square described as "the door of connection to the outside, is the window showing the level of material and cultural development" (Li 1998). Such places differ from those of most European metropolises such as Berlin where various modes of transportation have been combined into the main railway concourse, and travellers are dispersed there before they enter the city. Attendant upon the increased amount of passengers, automobiles and enlargement of railway station, the plazas in front of railway stations have become the most important part in this category and have new changes in designs.

3.2.1 **The Railway Station Square** in Shijiazhuang

Location and context

Shijiazhuang, the capital of Hebei Province, has a major rail junction heading south to the Yellow River. The construction of the railway line has brought the region prosperity and a booming population. The centre of the city is laid out on a grid with long axial roads. The Railway Station is sited almost in the middle of the grid. It is the most crowded and disordered place in the city area. Normally the station transfers one hundred thousand passengers per day (telephone interview with the designer Hui-lin Li the 24th May 2003). The disordered situation exacerbated by private and public transportations and passengers outside the station makes the city, to those who rely on the railway, less pleasant and attractive.

With an emphasis on reorganising traffic and renovating the environment, the Railway Station Square was rebuilt in 1997. The intention of the rebuilt project was to make everything convenient to travellers, solve problems of the confusion of function and to address the lack of aesthetic coherence.

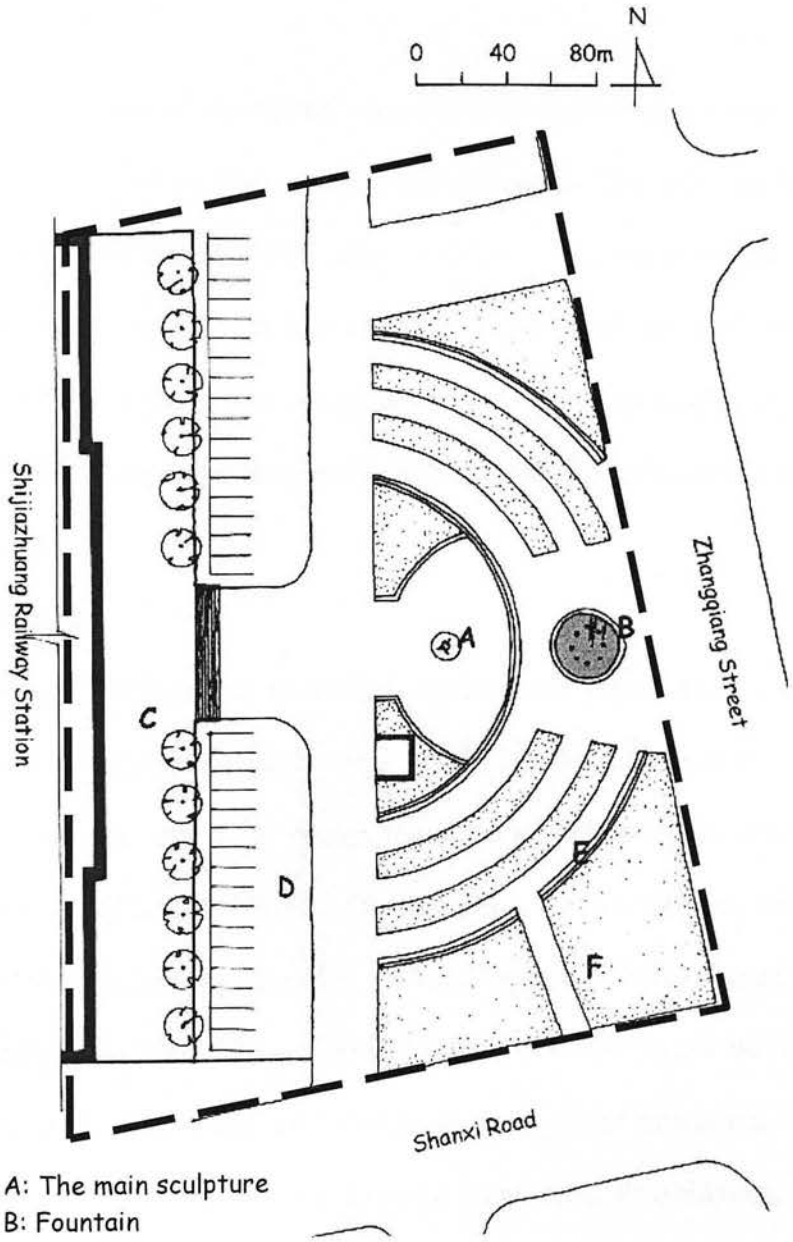


Figure 3.10 Site plan of the Railway Station Square, Shijiazhuang

Description

The square was divided into two parts (figure 3.10): main-square and sub-square. The sub-square includes two levels, the platform in front of the main building of the station is the main passing way of

entrance; and its two sides serve as temporary waiting places. Taxi and public parking spaces lie separately on the left and right wings on the lower level beside traffic routes. Sixteen lines of public buses and bicycles gather at the northernmost part of sub-square.

The main part of the square was originally circled by a fence occupied by disordered equipments for serving underground structures. The redesign turns the wedge-shaped piece of land into the focal body for embellishing the open space. The layout is one of concentric rings. A 15m high sculpture stands in the centre of hard paving, providing the focal point of the square. A fountain pond is semi-enclosed by grass beds, by steps ledges used for sitting along grass beds and by a low hedge planted around the border.

Analysis

The old circumstance, disordered, crowded and monotonous, has been changed (figure 3.10.1). But there remain points unsatisfied by the designer. The fountain pond, for example, was not in the design but a local officer thought it could express a 'modern flavour' and added it during the construction of the project, according to the designer Hui-lin Li (telephone interview, 24 May 2003). He also explained that there was no doubt that fountains brought fresh air and vitality to the plaza, but that they took no account of the construction budget nor the existing underground structure and its subsidiary facilities that limited the extent of the fountain pond. Also, as Shijiazhuang has a long and cold winter, the pond needed to be drained and protected over a long period. He added that such difficulties required intensive management and this appears to be far from

guaranteed. When the author visited the site in February 2003, the reality was just as the designer feared (figure 3.10.2)

Figure 3.10.1 Separated functional areas provide convenience and safety to passengers.
(Source: the author February 2003)

The top picture shows that the platform in front of the main hall of the railway station has become the first choice of temporary outdoor waiting area. Traffic has been separated from and limited to a lower level.

The bottom picture shows the main sculpture dominating the central area and the main body of the outdoor waiting area where people can sit or walk through without worrying about traffic flow.

Additionally, Li accentuated removing a building, which obstructed the view from the train station to the Great Stone Bridge and the Liberty Monument, which are symbolic

Figure 3.10.2 The square in winter
This picture not only illustrates the unpleasantness of the square in winter, but the obvious lack of shade indicates that it would also be unpleasant in the summer.

structures of the city. This, he suggested, would give the assembly and dispersal hub a characteristic and typical view of the city as a whole and enrich the local identity of Shijiazhuang. This is the final goal of the Railway Station's design. This renewal that the design is currently undergoing might address this gap between the reality and this intention.

The contradiction between the existing underground structure and ground level organisation is common to several square designs, some of which are discussed in the case studies. This reflects practical problems, of the mismatch between individual designs and an existing urban system and demonstrates that the improvements of the quality of

urban public space are unlikely to be dealt with by a single step; design, utilisation and management in a complex urban context is a chain, no link of which can be omitted.

3.2.2 **Northern Railway Station Square** in Shenyang

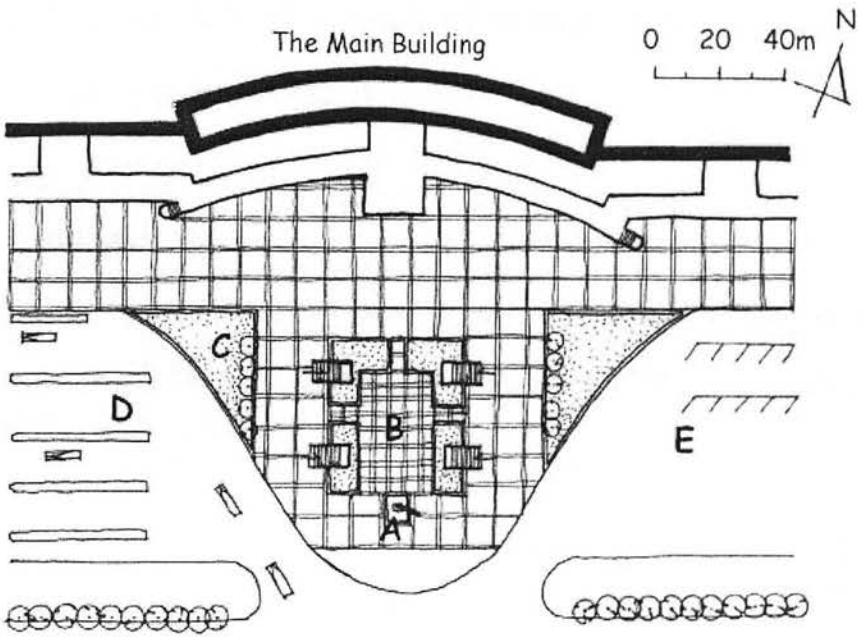
Location and context

Shenyang, the capital of Liaoning province, is both a railway junction and a banking centre in the northeast of China. The Northern Railway Station, located in the centre of the city, is one of the railway hubs of Shenyang. The square is the only way to enter or leave the train station. The problems it faced in 1998 before renovation were similar to those in Shijiazhuang, such as single-function and traffic confusion, additionally the lack of unity and inaccessibility of ground level to underground are the main problems. To deal with these problems, the redesign of the square put emphasis on re-organisation of automobile use, on creating outdoor spaces for relaxation and on vitalising the aboveground and underground spaces (telephone interview with Mrs Wen-fu Yan, the key designer, 6 June 2003).

Description and analysis

The whole area has been divided into five parts (figure 3.11). On the two sides are two areas for luggage and loading, the middle is a relaxation plaza for passengers and beside it separately are taxi and bus stances. The middle plaza of 2.45 hectare is the main area for passengers passing and going to, for example, the underground or ground level parking, the main hall or the underground shopping centre. Colourful paving

differentiates the area from others and green lawns border its edge, sub-dividing the whole into different spaces combined with benches to provide sitting areas. The one-way



A: The main sculpture
B: The sunken area
C: Lawns
D: Bus station
E: taxi parking

Figure 3.11 Site plan of the Northern Railway Station Square, Shenyang

arrangement of taxis and buses ensures free and safe pedestrian movement in front of the main hall. The separation of passengers and automobiles routes divides relatively independent spaces for different use and effectively reduces the disorder of utilisation of the space, additionally providing convenient access to the underground structures.

3.2.3 **Zhongshan Square** in Dalian

Location and context

Zhongshan Square is described as the hub of Dalian in 'The Rough Guide to China' (The Rough Guide to China 2000: 199). Around its area, "Japanese and Russian buildings, German cars, KFC and McDonald's, girls in miniskirts and western dance music blaring from the shops give it an international flavour".

Description and analysis

The plaza is actually a traffic island joined by ten traffic roads, a circle as big as 169 metres internal and 213m external diameter (figure 3.12). The surrounding buildings

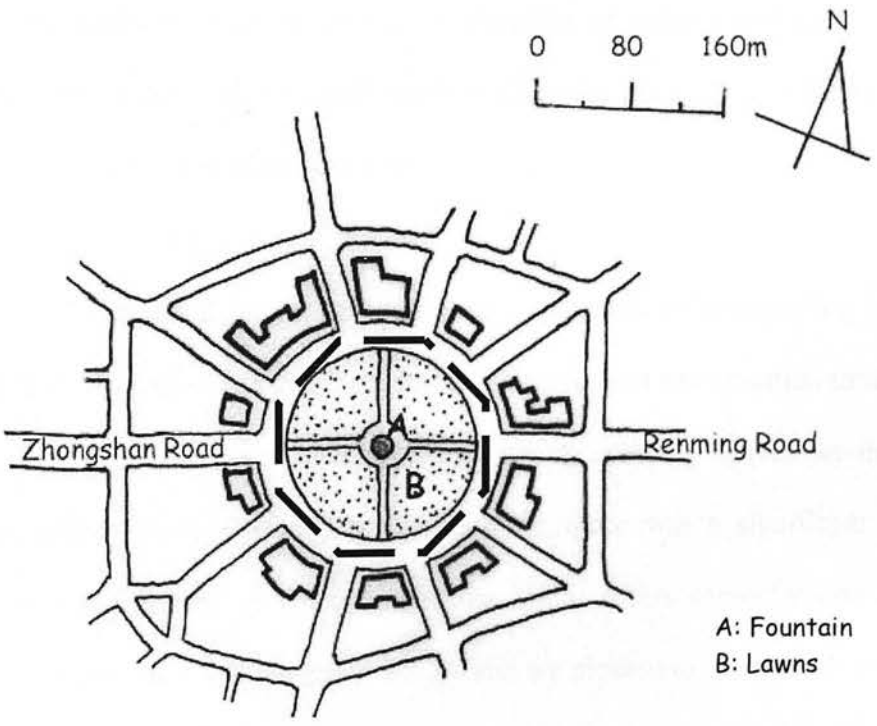


Figure 3.12 Site plan of Zhongshan Square, Dalian

include the ten most recognisable buildings of the city but these were screened

completely by a high hedge and trees before renovation. Despite it being a useful traffic dispersal hub, and an oasis of the city, its block-like form destroyed the unity and continuity of urban scene. In 1996, green lawns and several trees replaced the high hedge to make the square no longer a concealed space. The redesign also enlarged the spatial border to the surrounding buildings, creating the best vantage point for appreciating the urban scenery. The square is divided into four lawns by the crisscross paths, and a fountain of European style sited at the centre becomes the focal point of centripetal sight. The trees provide vertically spatial extension and reveal the facades of the surrounding buildings. Benches and ledges of lawn terraces provide seating areas along the paths and the fountain. The employment of illumination and music give a strongly 'modern' flavour. In the daytimes there are only some travellers or elders strolling, as the noise from traffic flows is too loud. At nighttimes it is a popular place for dancing groups and is filled with spectators and relaxing citizens.

The redesign concentrated on openness and the connection of surrounding buildings, eliminated high hedgerows and dense vegetation, but it did not pay attention to reduce the negative affect of traffic noise, and pollution, which crucially leaves an unpleasant impression of the square. Opening up the enclosed space was a significant step, for revealing the characteristic of the urban setting. As it offers some famous views of Dalian, citizens are proud of Zhongshan Square and are pleased to spend time here (based on interviews in May 1998), and that is the main reason people repeatedly come to it and forms the main criterion of this public space.

3.2.4 Assembly and dispersal hubs summary

The obvious change in designs of assembly and dispersed hub is the increased intention to reorganise and control disordered traffic, the beautification of urban landscape and the provision of outdoor stopping spaces of high quality. These spaces, being points of arrival in many cases, also have the important secondary function of providing a 'snapshot' of the urban character. They are also places where people may need to rest or wait in the course of their travels, calling for more sitting areas and more shady trees.

3.3 Leisure spaces

Leisure spaces mainly mean those squares for short strolls, rest or recreational activity sited in commercial areas, residential areas and the nodes of streets. These squares are more relaxed and dedicated to 'optional activities' (Gehl 1987) compared with the above two types. Between the 1950s and the 1980s, in a politic dominated by the principle of constructing high-productivity cities across all urban development, leisure spaces were not advocated. Only in recent years, in which the premise of the high-productivity city was transformed into the principle of the living city, have leisure spaces been designed and built in numbers.

3.3.1 **The Cultural Square** in Changchun

Location and context

Changchun, the capital of Jilin province, literally means 'eternal spring', and the springtime here is indeed lush and green but this designation might express a hope, not the reality, considering the region's freezing winters. The city has a historical notoriety deriving from its role as Hsinking, capital of Manchukuo, the Japanese controlled states from 1932 to 1945. The Puppet Emperor's Palace and a huge plaza in front are the traces of this history. After liberation, this huge space has been used as the main place for mass rallies for many years. In 1996, a renovation project was undertaken and, as it is located in the city centre where the preserved historical buildings are concentrated, it is called the 'Cultural Square'. The redevelopment project of surrounding buildings was implemented in 1999 in order to make important buildings prominent and unify the historical context.

The plaza is a huge square in shape, 469m long and 453m wide, totalling 21.25 hectares in area, with a main part and a sub-part of 3.8 hectare as a sports ground. The main traffic road (Xinmin Street), which stops at right angles to its southern border and forks to the east and west, and the sub-traffic roads which run along the eastern and western flanks, isolate the square on three sides. On the northern border stand three buildings and in the middle is the main building of Changchun Science University (originally the Palace), behind which is a public park.

Description

According to the relationship of the square and surroundings, the layout extends the axis of the Xinmin Street with the main building as its backdrop and separates the site into symmetrical parts (figure 3.13). The axis leads from its southern main entrance. The

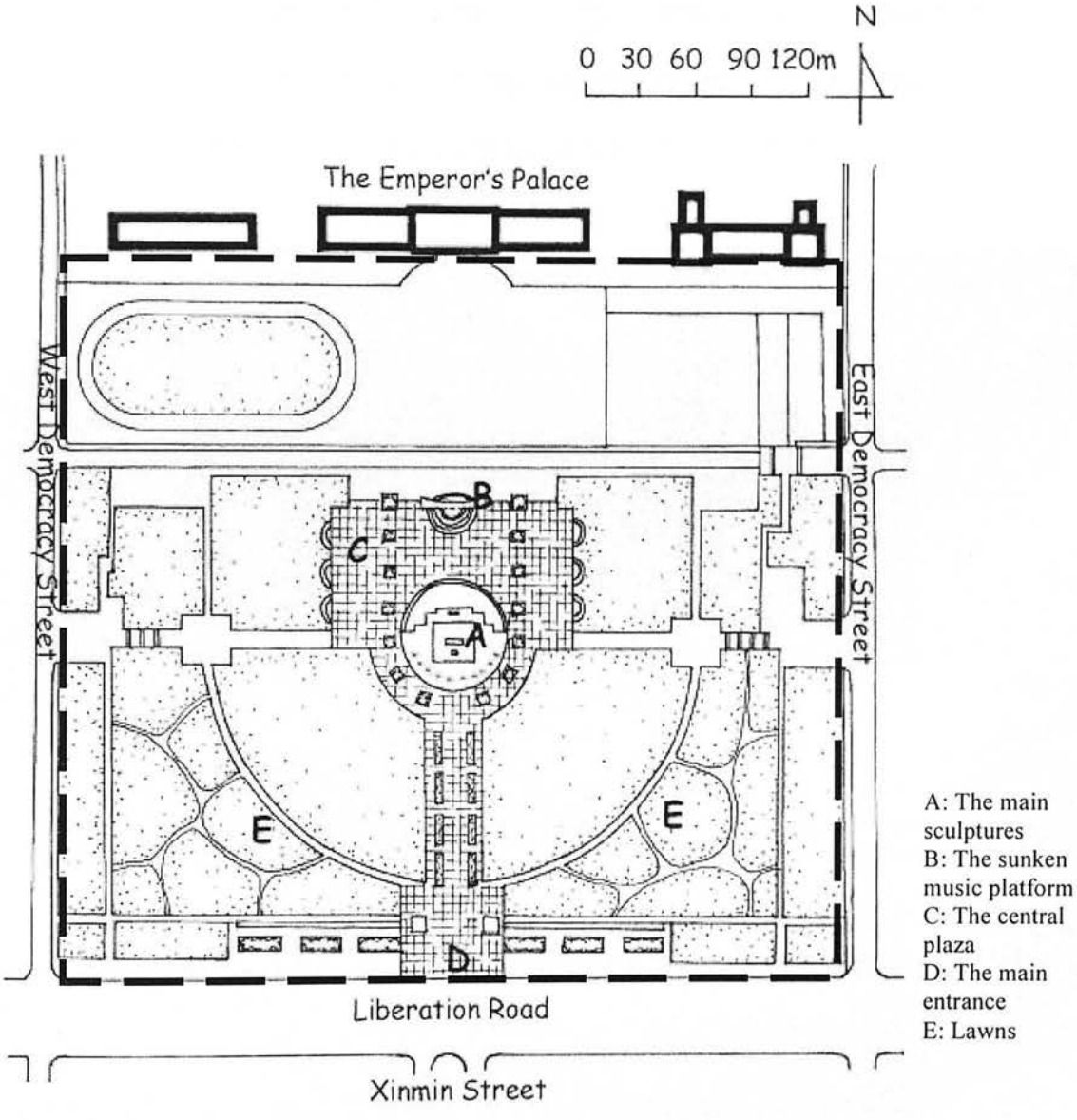


Figure 3.13 Site plan of the Cultural Square, Changchun

approach pavement of 35m in width and 100m in length is the central plaza of 1.6 hectares and a sunken music platform in the main area of the square ends the axis. In the central plaza, a raised flowerbed surround a group of sculptures, the focus of the square expressing the yearning for brightness and indicating the civilisation created by human

deeds. The central point is a 35m tall structure decorated by a sun-bird inspired from Chinese legends, beside which a stylised male figure stands up and a recumbent woman lies beside a pond. Trees in rows enclose the eastern and western border and graves spread at the southwest and southeast corners (Cheng *et al.* 2000: 54, 56).

Figure 3.13.1 In this large urban square, even although grasses occupy 60 percent of the area, the hard paving is still as big as 7 hectares. (Source: Urban Square I, 47)

Analysis

The developers put enormous effort into trying to make the square become "the most important urban public space, the important 'window' of urban culture and the symbol of the city" (Shi *et al.* 2001: 42), holding a national competition to search for a high quality design, reorganising the surrounding structures, erecting a central feature to create a sense of space, and incorporating 10 hectares of lawn, 32 sculptures, 39 flowerbeds and

thousands of pots of flowers, 350 benches, 2000 pigeons and 1610 metre of fencing. Although all these measures might to a certain extent beautify the square, none make it become a three-dimensional and human scale space (figure 3.13.1). Additionally, underground construction is postulated for three-dimensional urban development, intended to accommodate shops, restaurants and an entertainment centre beneath the square rather than utilising such a huge open space on ground level. Such ideas and measures reflect one response to the problem of urban square, which is to escape these colossal spaces and dig out more amenable urban environments beneath them. This is to avoid more general issues that demand much more serious attention.

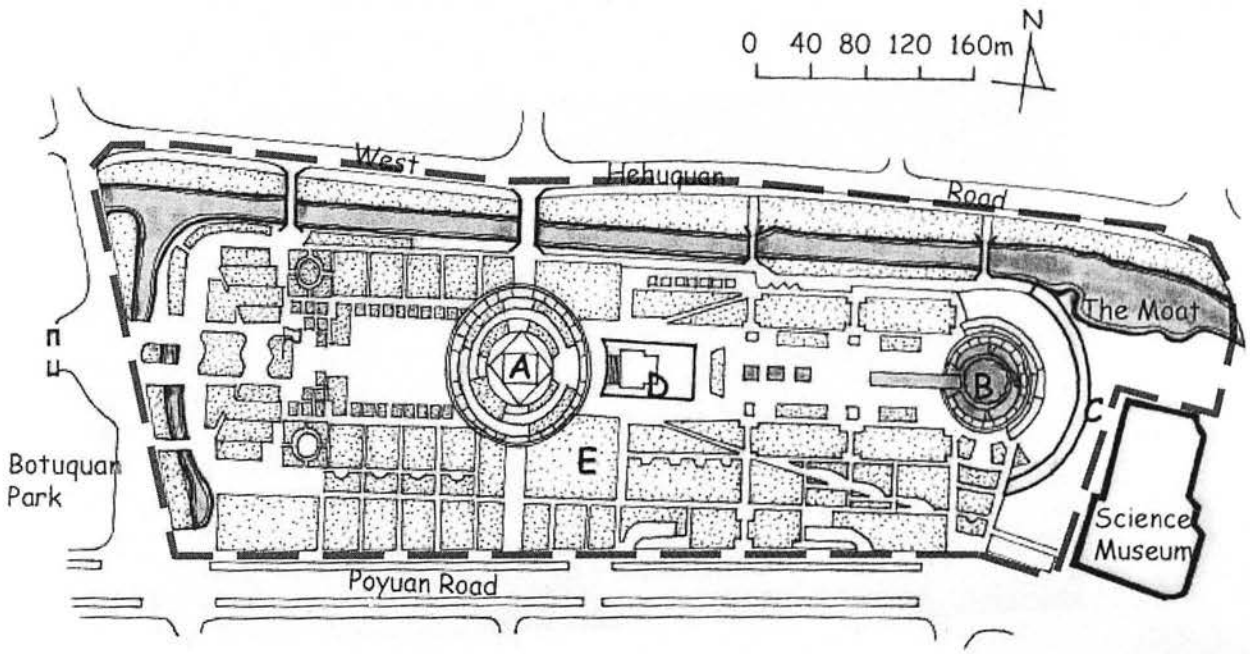
3.3.2 **The Quancheng Square** in Jinan

Location and context

Jinan, the capital of Shandong Province, is a busy industrial city with three million inhabitants and the province's major transit point and communication centre. It is famous in China for its natural springs; these are presently preserved in typical Chinese style gardens or parks but have become rather feeble as their underground water is overused constantly year by year. A guide book (Let's Go, China; 2000: 199) describes the city as taking "life one step at a time, never pushing, never rushing". A huge urban square might be a signal of the change of its pace.

The Quancheng Square (Spring Square) is a trapezoid, approximately 780m long and 230m wide, almost 17 hectares in total. It is located in the heart of the city, surrounded by

traffic roads from four sides. It is neighboured by the famous Baotu Spring Park on the west, Shandong Scientific Museum to the west and the Encircling City Park occupies its border on the north and across the main road to the south is the city-centre shopping area. Residential houses, shops, a school and a small factory once occupied the land. In 1999, this land was reclaimed as a largely modern square (figure 3.14). The principles of the



A: The main sculpture
B: The lotus fountain
C: The Colonnade
D: The sunken plaza
E: Lawns

Figure 3.14 Site plan of Quancheng Square, Jinan

square design have referred to every aspect necessary to satisfy the needs of visiting, relaxation and entertainment to express Qilu culture, enhance the distinctive of the Spring City, to give consideration to social and economic effects, to enhance its the relationship

to the city, to control the functions of a square and to create a green space (Shi *et al.* 2001: 29).

Description

An 80m wide axis and hard surfaces control the pattern of the square, cutting through two belts of green lawns beside it and penetrating subsections of the square from east to west.

Figure 3.14.1 The panorama of Quancheng Square Along the axis, the symbolic sculpture of spring at the beginning, the lotus fountain in the middle and the cultural corridor has been arranged by designers to dramatise and enrich the vast space. (Source: Urban Square I, 31)

The entrance plaza connects to the Baotu Spring Park at the eastern tip, the Symbol of

Spring sculpture extends the scale into the vertical dimension and becomes the core of the square and streets, where a sunken plaza leads people to underground shops and a large curved corridor ends the axis (figure 3.14.1), embraces the central pond and forms the backdrop of the square. The components of the square are admittedly rich and varied, such as ground paving symbolising 72 famous springs, the steel lotus shape sculpture that evokes the flower of the city, the series of fountains and cascades, the nuclear sculpture inspired by Chinese character 泉 (spring), the cultural corridor decorated in relief, sculptures and calligraphies which depict local legends, the bridges crossing over the moat and the large lawns and groups of flowers.

Analysis

However, although all these ideas enhance the local distinctive character, they do not cohere into an image reflecting the quality of a town set by the hills and beside lakes. When the lotus fountain is silent (it sprouts water only in certain seasons and stays quiet through the winter), it makes a negligible contribution to the cityscape. The axis only sets up relationships with the structures inside itself. The square is a whole of its own, not a component of the wider urban complex.

More important, Jinan is one of the well known cities amongst the Chinese 'hot furnace' regions in terms of its high temperature in summer time. Such a huge area of hard paving (more than 4 hectares) without shelter and shade positively deter any optional activities and lies empty on most summer days (Wen Zhang, the official of Shandong Construction Committee, interview on phone, 8 March 2003). The author, visiting the square on 10th

and 11th February 2003, had to hide in a coffee shop to observe the square across a busy traffic road because of the icy and brutal wind sweeping over the square. During those two days, only a few people strolled or scurried hastily across it quickly and even though there was only a small patch of ice, someone accidentally slipped and fell on it. The only

Figure 3.14.2 People gathered on a windy winter afternoon, attracted by an occasional event, occupy a corner of the huge square.
(Source: the author, February 2003)

social gathering the author saw was when a team performed traditional dances to advertise their production (figure 3.14.2). There are very few benches and the square seems fit only for visiting but not sitting and meeting. Chen-yang Su comments that, though the design of the square has concentrated on the meaning and spatial creation, the large scale and axis are incompatible with the traditional context, which is symbolised by 'the cityscape of hills scenery as a whole with lotus flowers covering half the town',

further stating that "it is an unsuccessful example, a total of 100 million pounds cost gives no impression except a huge hard surface and an underground shop. The square is without vitality and attraction" (Su 2001: 54).

3.3.3 **Xidan Cultural Square** in Beijing

Location and context

Beijing, the capital of the country has been considered as China's showcase to the world, involved in large scale reconstruction in recent years. Wide boulevards and high-rises have been used to create modern Beijing on the grid of ancient city and, Xidan Cultural Square is built under such idea. As a part of the Xidan commercial area renovation project, Xidan Cultural Square was taken as the symbolic entrance of this commercial area, built in September 1997. It is considered as one of several oases in this area and comprises a leisure centre at underground level.

The site is located at the junction of West Changan Street and North Xidan Street, and is adjacent to the National Bookstore, a department store, business centres and hotels; these buildings give it spatial enclosure from east to west.

The designers analysed the existing condition and needs carefully and formulated the principles of design from four aspects. First, they argued for as much greenery as possible in order to play the role of 'green lung'; second, they provided connections between the square and surrounding buildings and created open space which displays the urban

landscape; third, they provided an outdoor circumstance integrating the functions of greenery, transportation, relaxation and meeting for citizens; and last, they emphasised the connections of bus, metro and pedestrian in order to organise streams of people.

Description

Based on these principles, there are three measures that have been employed. The total 2.2 hectares site (figure 3.15) is laid into a geometric axis pattern to create visual

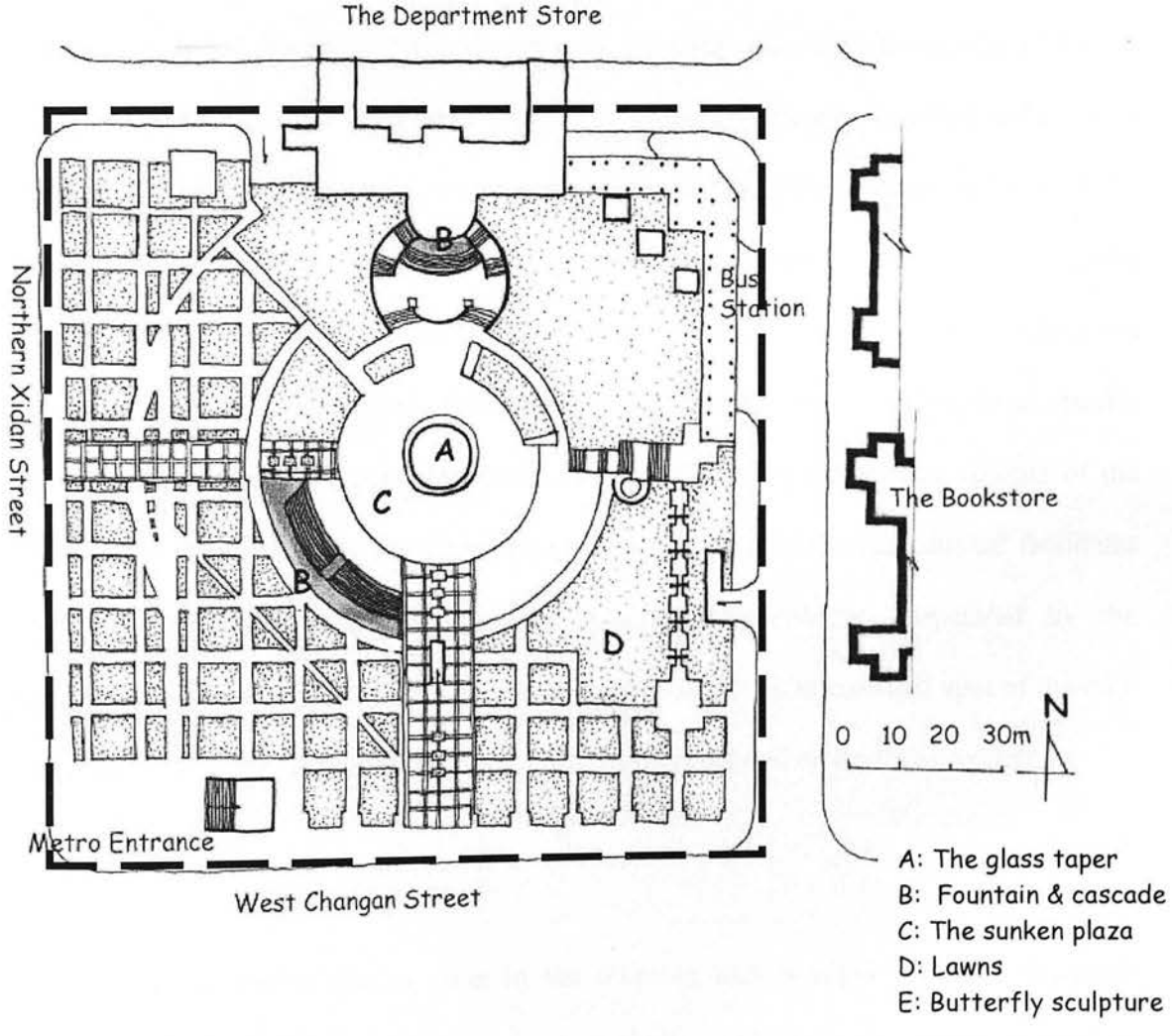


Figure 3.15 Site plan of Xidan Cultural Square, Beijing

enhancement and to satisfy different needs of people; it is also detached along the southeast to northwest diagonal, into a relatively busy part and a relatively quiet part. Additionally, the site has been artificially raised on northeast part and over a bus terminal, such keeping the unity of the square as a green area. The axis of the square is the extension of the axis of the department store that forms its background. The meeting point of this axis and the diagonal becomes in the design the core of the square. The core is shaped into a sunken plaza which connects to ground and underground spaces, a glass taper stands in the middle for bringing sunshine to the underground and is the 'symbol of the square' to the designers (Shi *et al.* 2001: 5). Stepping away from the sunken plaza is a bifurcating stair connecting to the second floor of the department store and fountains in the middle of the stairs are used to embellish its façade. The designers deem that the "conspicuous axial relationship and the pattern of concentric circles give the square imposing manner" (Shi *et al.* 2001: 5). The southwest part is figured with a grid-pattern of green grass as a passing path. In the northeast part, covered by a cold-resistant species lawn, grass, evergreen shrubs and deciduous shady trees give the basic colours of the square. The original shops sited here previously and most of the recreational facilitates are located underground. The passing streams of people are separated by the arrangement, which effectively organises the order of this most crowded spot of the city, leading to the metro at the southern edge and the bus terminal on northeast corner.

Analysis

The square is almost always quiet in the morning and at night. In most daytimes, however, there are always people passing through (figure 3.15.1). The author noticed (on

Figure 3.15.1 Everyday there are always crowds walking through for working, shopping and changing transportation. (Source: the author, February 2003)

visiting the site, 8th and 9th October 2002; and 13th and 14th February 2003) that many people preferred sitting along the southern and western edges but not the more quiet place which the designers arranged for sitting or chatting; also they preferred walking through paths, not the steps, even though the paths were crowded and the steps were little used (figure 3.15.2). The author, interviewing some users, found that the diagonal path is considered "the short way to cross the square", the eastern edge, with its gradually rising retaining wall, is "neither attractive nor intimate" and they "would like walking through or staying with many companions". Moreover, the essential criticism refers to the relation between the surrounding buildings and the square.

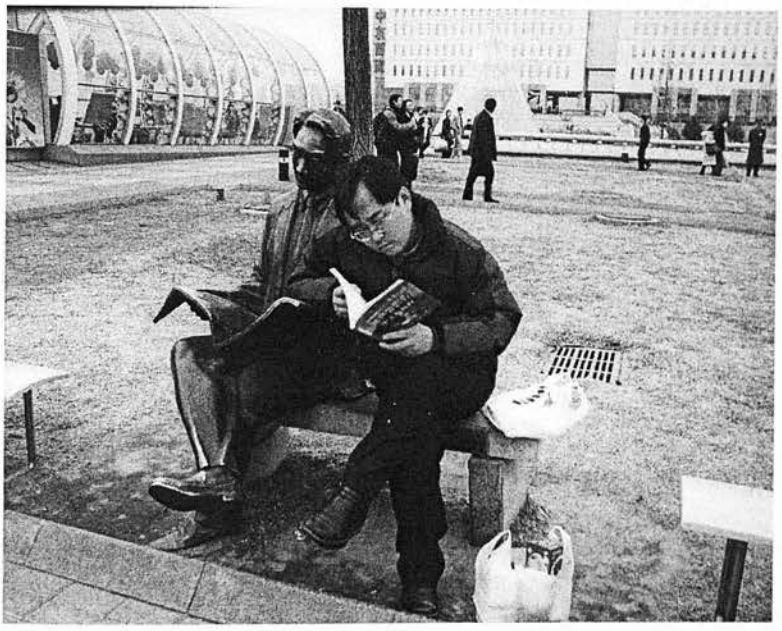
The rising landform was intended to solve the contradiction of functions of 'bus terminal' and 'square' while maintaining a unified enhancing its visual effect. This reflects two aspects of the problem of the square design. One is that the relationship of the square and

Figure 3.15.2 The picture shows the preference of the directions crowd flow normally. (Source: the author, February 2003)

the surrounding buildings has not been emphasised on or, rather, the square has been considered as a whole of itself, not of the city. However, the urban square is sited at the entrance of the most popular commercial street, and has a strong sense of spatial enclosure and huge potential of users. Additionally, its size, albeit larger than normal human scale, is not monumental as found in many urban squares. More importantly, it is connected directly to the backdrop public buildings which offers significant opportunities for social functions such outdoor coffee and restaurant, especially as the backdrop building stands against the wind and faces to the sun. At present, such functions are separated from the square by the retaining wall, offering only a passage way behind the wall and people gather at the corner of western side of the department just outside the square.

Greenery is one of the benefits offered by the rising landform, partly because greenery is important to ecological balance, therefore, it becomes the easiest means to achieve

Figure 3.15.3 The two pictures give some indication as to the proper locations for seats. (Source: the author February 2003)



In top picture, the large area affords sitting only around the edge.

This bottom picture shows that damage to the lawn is unavoidable, should benches be built on it.

anything in open space construction that can said to be regenerate green space. Greenery is important, but essentially it is only one of many measures for increasing the quality of the urban environment and provides comfort to people physically and psychologically. In

this case, its coverage of the space is inappropriate, for it destroys the space's chance to operate as a square tightly connected to its surrounding.

Figure 3.15.4 Public art in different styles and themes(viewing from east to west).
(Source: the author, February 2003)

Despite the issues in the relation to surrounding buildings, the Xidan Cultural Square is a well-used public space as there are always people passing through it. The southern and western edges are used almost exclusively as a passage route to the transit facilities below and this, to a certain extent, engenders an amount of 'bustle' in the square. However, some details of design raised by the utilisation of the square need closer attention. The lawn grid is an inconvenience to passing crowds and the grass has been damaged (Shu & Su 1998). The seats arranged along lawn edges suppose that people sit facing to the pavement and put feet on kerbstone, an awkward posture (figure 3.15.3). There are many

artistic pieces employed to enrich the spatial character such as a glass pyramid, an artificial tree, a big butterfly sculpture, bronze statues of musicians, a relief-wall, a glass corridor, a structure and fountains but there is a lack of a thematic idea to harmonise them into a whole (figure 3.15.4). The Xidan Square is a new figure completely, and is difficult to find it in any trace of the past.

3.3.4 **The Ancient Towers Square** in Xian

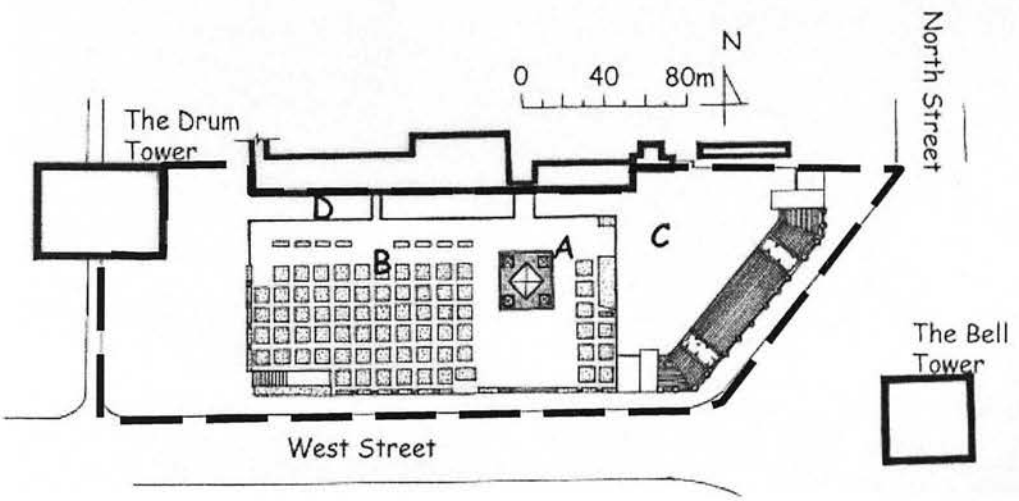
Location and context

The capital of Shanxi Province, Xian is a manufacturing town of five million inhabitants and holds a key position in the fertile plain between the high loess plateau of the north and the Qinling Mountain to the south. The city has a proud place in Chinese history, as between 1000 BC and 1000 AD it served as the imperial capital for eleven dynasties. The Tang Dynasty grid pattern of old Changan survives in Xian today, as does a considerable quantity of historical architecture. Despite the drawbacks of pollution and congestion, historical and cultural treasures are essential to the city in terms of its charm and characteristics.

The symbols of the city, the Bell Tower and the Drum Tower, were built in the fourteenth century, and the morning striking of the bell and the evening beating of the drum constitute an important continuation of ancient urban management and folk custom. The Bell Tower, one of the major axial gates to the ancient Xian city (Ming Dynasty 1368-1644), currently sits at the cross-junction of four streets. The Drum Tower, sited at a

distance behind, is now the entrance of traditional food street in an Islamic style, a local distinctive spot that no visitors could miss.

The Ancient Towers Square connects the two famous buildings at the two ends of a southeast to northwest diagonal line. The site originally held the traditional market and shops and was a place of spontaneous local activity (figure 3.16). The renovation project



A: Fountain
B: Lawns
C: The sunken plaza
D: The sunken passageway

Figure 3.16 Site plan of the Ancient Tower Square, Xian

took place in 1995, moving market and shops into a newly erected underground space, and transposing the ground level into a meeting and leisure space. The landscape design emphasises greenness, traditional architectural rhythms and yet has a modern flavour, giving prominence to the Bell Tower and the Drum Tower. Jin-qiu Zhang, the key designer said "[this project] has carried on exploring the integration of traditional and modern, preservation and renovation, and planning and design" (Zhang 1996).

Description

The 2.18 hectare area is structured around a green plaza, a sunken plaza and a sunken commercial street (figure 3.16.1). The green plaza's layout is in a grid pattern, combining

Figure 3.16.1 An overview of this public space in a bright sunny day, looking towards the Bell Tower.
(Source: the author, October 2003)

grass patches and paths to indicate "the basic pattern of the ancient city in China" (Zhang 1998). Glass pyramids, decorated with a stainless steel skeleton shaped to echo the pinnacle of the Drum Tower, provide natural lighting to the underground shops sunk below a water pond. New commercial buildings in a local construction-style bound the north side. The sunken commercial street alongside connects with the sunken plaza at the east. The Wall of City History displays the change of orientation of Xian from the Zhou Dynasty (1066 BC –221BC) to the Tang Dynasty (618AD-907AD). There is no large scale structure in order to give prominence to the ancient buildings.

The square has been become a new popular spot especially to local citizens. In the morning, it is a place where elders enjoy *yanko* dance, perform sword-dances and other

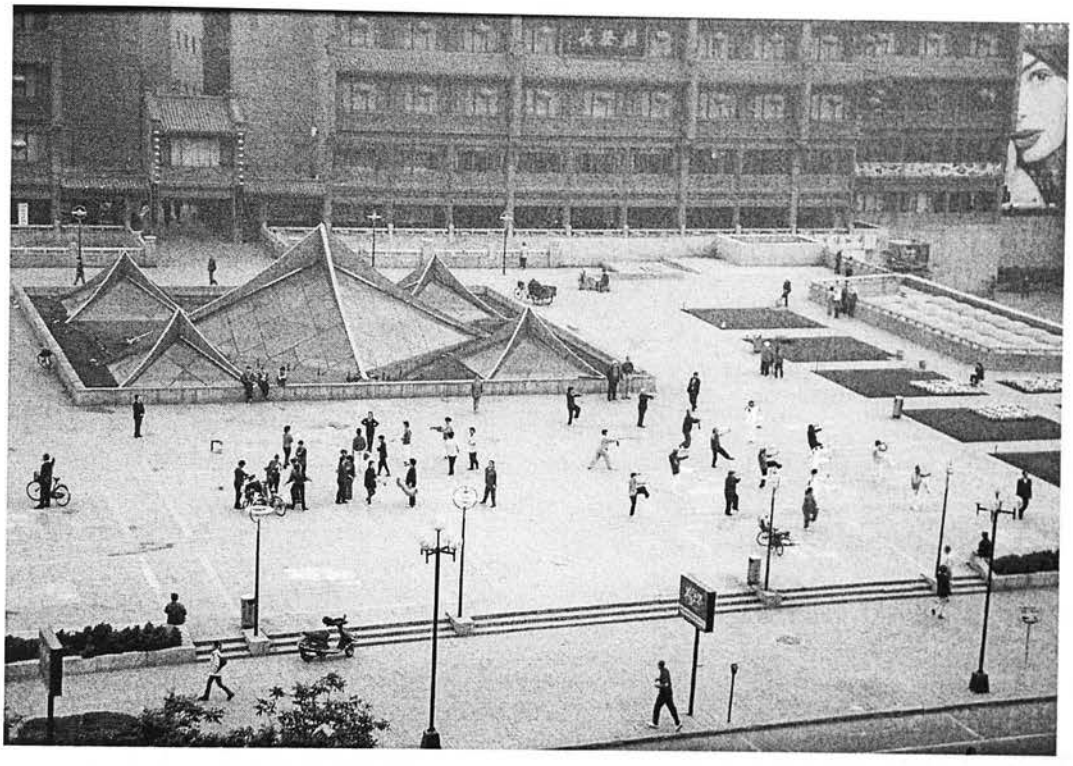


Figure 3.16.2 This is a popular place for people who enjoy morning exercise. Here, citizens regularly perform Yanko dance and sword-dances, presenting a scene of local culture and custom.
(Source: the author October 2003)

exercise (figure 3.16.2). In the afternoons there is a playground for children and teenagers, at night time this becomes a dating venue for younger couples or groups. During the daytime there are always people passing, sitting, chatting or waiting. When the author visited the square in October 2002 to learn people's perceptions through informal interviews about the square, she heard that: coming to the square was a 'birthday gift' that a six-year-old boy had asked for from his parents, as he could run around freely; it was a holiday plan of several groups from suburban areas as it is new and highly recommended by others; it was a normal route of several retired people, being

clean and lively; it is an outside place for lunch break of workers; it is an outdoor place to close to the daily life in several foreign travellers' eyes; it is a place to spend unemployed time.

Analysis

Several people who worked in nearby shops complained the square is good but not in summer. They described the square as like "a barbeque oven" and they felt "like meat on the grid" when they walk through the square, they are afraid and always try to avoid going out of their rooms (figure 3.16.3). They said that from June to September is the hardest time for the people who have to pass through the square in daytime, and there is a desperate need for some shady trees. This problem was considered in the design stage but could not be solved, for the reasons that underground structures limited tree growth which is a crucial problem with many squares. Therefore, to keep the space open and highlight the ancient buildings, lawns were taken to be the main body of greenery (discussed with Jinqiu Zhang at the First Conference of Urban Design in Shenzhen in 1998). The explanation represents general issues in square design, the lack of conditions for tree growing and the conflict between building view and tree view. Greenery is accentuated all the time but is always the one that has been abandoned after weighing of income and cost. Lawns have been taken as the best way to balance these conflicts , however, these only play the role of embellishment rather than serving for citizens' stroll or take a rest, needs which appreciations of other forms of greenery, flowerbeds or trees might best satisfy. This highlights the endemic dilemma of how to make soft surfaces play a role in contemporary urban square design.

Figure 3.16.3a This picture shows the place people are afraid to walk through in summer days.
(Source: 2000 Urban Square I, 79)

Figure 3.16.3b A basketball competition on a national holiday attracting lots of spectators shows the value of its large hard surface.
(Source, the author October 2002)

3.3.5 **Hanzhong Gate Square** in Nanjing

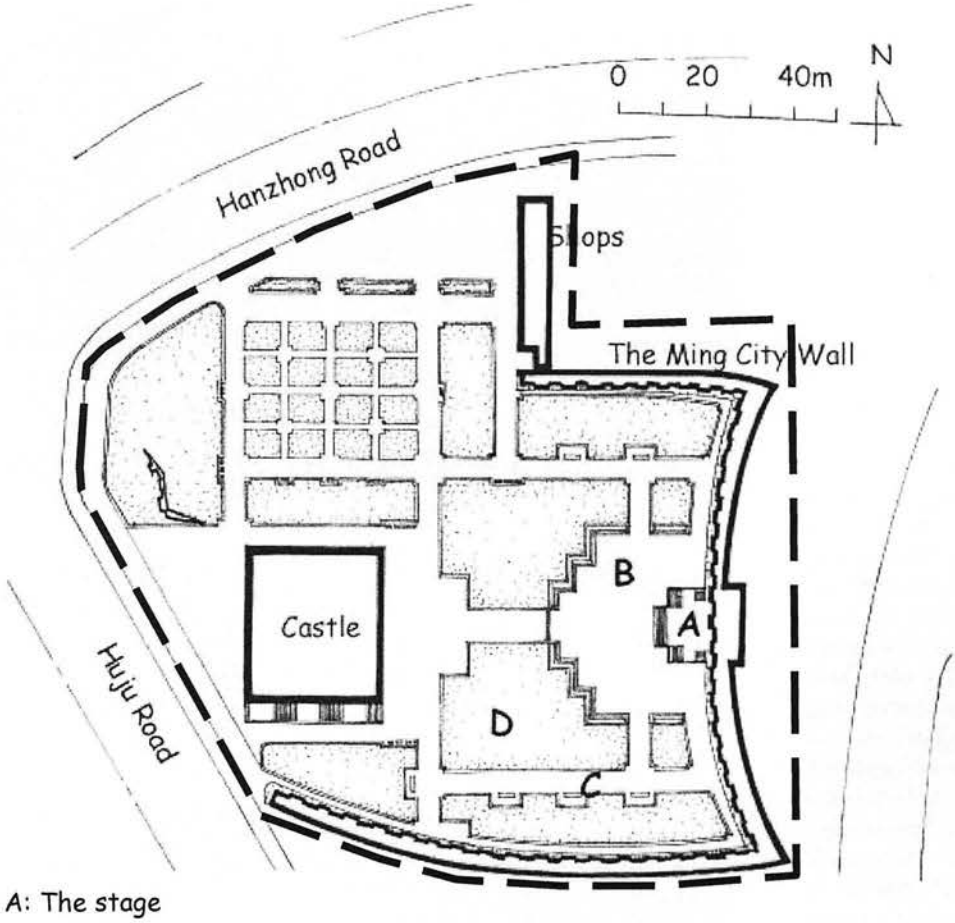
Location and context

Nanjing, the provincial capital of Jiangsu Province, lies on the Yangtze River's southern bank. It was established as the capital of ten dynasties during its 2400 years history and kept countless historical traces. The Ming City Wall, built early in the Ming Dynasty (1368-1664) is famous one its scale, momentum and adaptation to the landform and river system, stretching along the ridge of the hills and using the river as moat. This wall laid the foundation for the scale and pattern of the city of modern times. The project of the Ming City Wall Sight Belt is an important and protective measure in the recent development strategy (Zhu 2002: 56).

Hanzhong Gate Square, one part of this huge project, was finished in 1997. It is located at the southeast corner of the crossing of the two busiest vehicular roads. The Stone City Gate (or Hanxi Gate) and the over 200 metres long Ming wall form the core of the square. Actually the gate is the oldest ancient gate in Nanjing (built in Southern Tang Dynasty 902-979). It was rebuilt, together with the wall around 400 years later and become the thoroughfare on the west of the city. In contrast to surrounding high-rising modern buildings, the ancient structures loom old and use smaller architectonic gestures. Unfortunately, the emphasis of the design has not focused on enhancing this historical sense but more on creating a contemporary favour and some striking contradictions have arisen.

Description and analysis

The general geometrical layout of the square is incompatible with the ancient structures, and a grid pattern of patches of lawns, used to indicate the ancient city plan, might be vaguely reminiscent of other ancient cities such as Beijing or Xian but is quite unrelated to the free style city plan of, Nanjing, the pride of its people today (figure 3.17). Through



A: The stage
B: The activity area
C: Seats
D: Lawns

Figure 3.17 Site plan of Hanzhong Gate Square, Nanjing

a series of sets, a monument of event record, lanterns and stone blocks which imitate ancient models, decorated ancient patterns and an ancient well reflect an antique

atmosphere, the hard lines and polished granite seating wall, railing and hedgerows disturb the simple enjoyment of the past. The buildings behind the ancient wall have not received attention in design, they dominate the vertical space, distracting people's sight lines and fragmenting the unity of the square (figure 3.17.1).

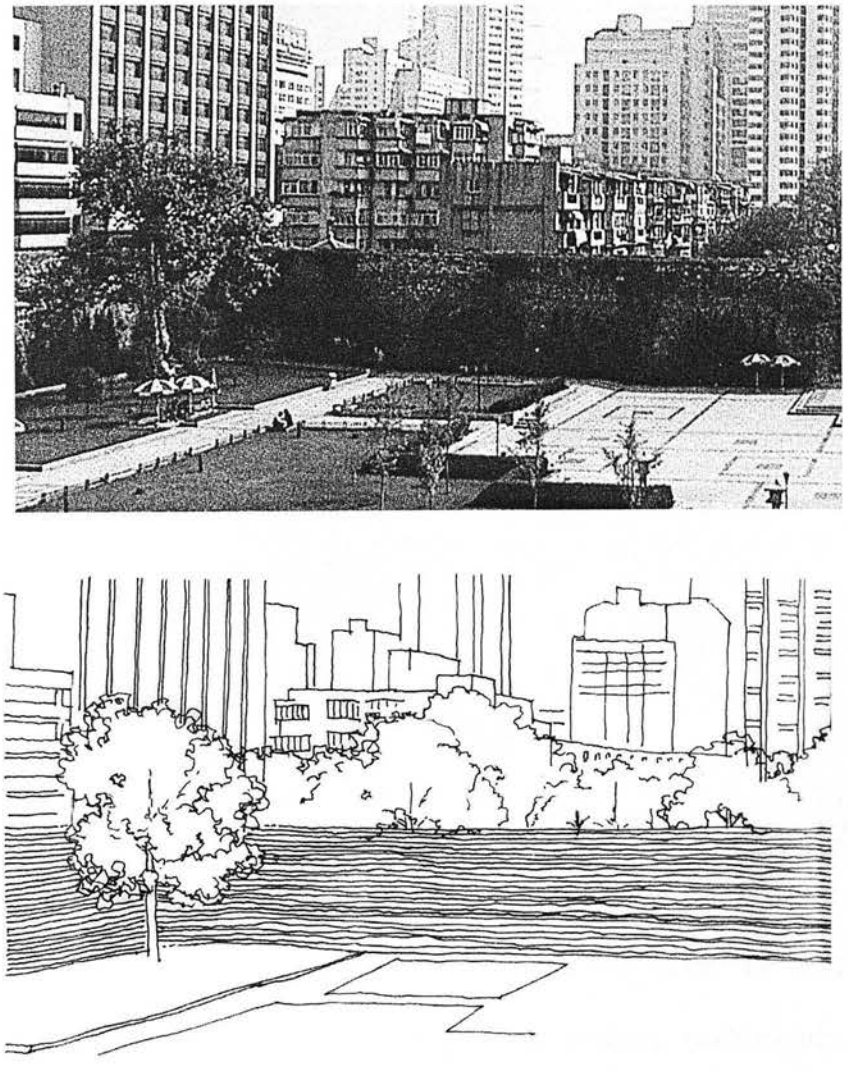


Figure 3.17.1 Confused design:
The picture(top) shows new evergreen conifer trees hiding the ancient wall but not the high-rising buildings in the background. Perhaps it would be better if the trees were on the other side of the wall – once fully grown they would hide the background buildings from sight without obscuring the ancient wall itself as illustrated in the sketch on the left. (Source: the author October 2002)

Concentration on people was another stated focus of the design, but still the comfort and convenience to users appears to have been ignored. The author noticed (20 October 2002) generous seating areas of various orientations and shapes but almost all were exposed to

the direct sunshine without tree shade (figure 3.17.2). A nearby shopkeeper explained

Figure 3.17.2 Are the parasols useful for cooling the air as good as trees? (Source: Urban Square II: 29)

Figure 3.17.3 The sign: "Please do not walk on it". (Source: the author October 2002)

that there are usually some parasols in summer but added that they are not used, there are rarely people sitting there in daytime. Nanjing is the one of four hottest Chinese cities (the others being Jinan, Chongqing and Wuhan). Additionally, a city emblem made of small cobbles laid in front of a path carries a small sign that translates as: The symbol of the city emblem, please do not walk on it (figure 3.17.3). This is another expression of misunderstanding of public open space, similar to 'keep off grass' signs. Thus an

ignorance of freedom of using public space universally exists, causing conflict in the essential meaning of public space, as is further discussed in Chapter Four.

3.3.6 **Beibuwan Square** in Beihai

Location and context

Beihai is situated on the Beibu Gulf on the south coast in Guangxi Province. It is a new developed town since the 1980s with 560,000 people. It is famous for the Silver Beach and pearl production. Compared with its mesh of needlessly wide new roads and vacant high-rises, the main urban square of the town is more pleasant and intimate.

Beibuwan Square lies in the busiest shopping area. Originally it was 'L' shaped, more than 2 hectares in total. Sichuan Road and Middle Beibuwan Road run along its northern and western sides. A sculpture called 'The Soul of Southern Pearl' was erected in its northwest part as the focus of views. The sculpture stood with three mature banyan trees and was surrounded by fourteen trees of friendship, which represent fourteen open port cities, while lawns covered the rest of the square. The pavements, all 10 metres wide, were not enough for the people who constantly crowded there and the lawns became seriously damaged. The problems of the previous square, as summarised mainly by the

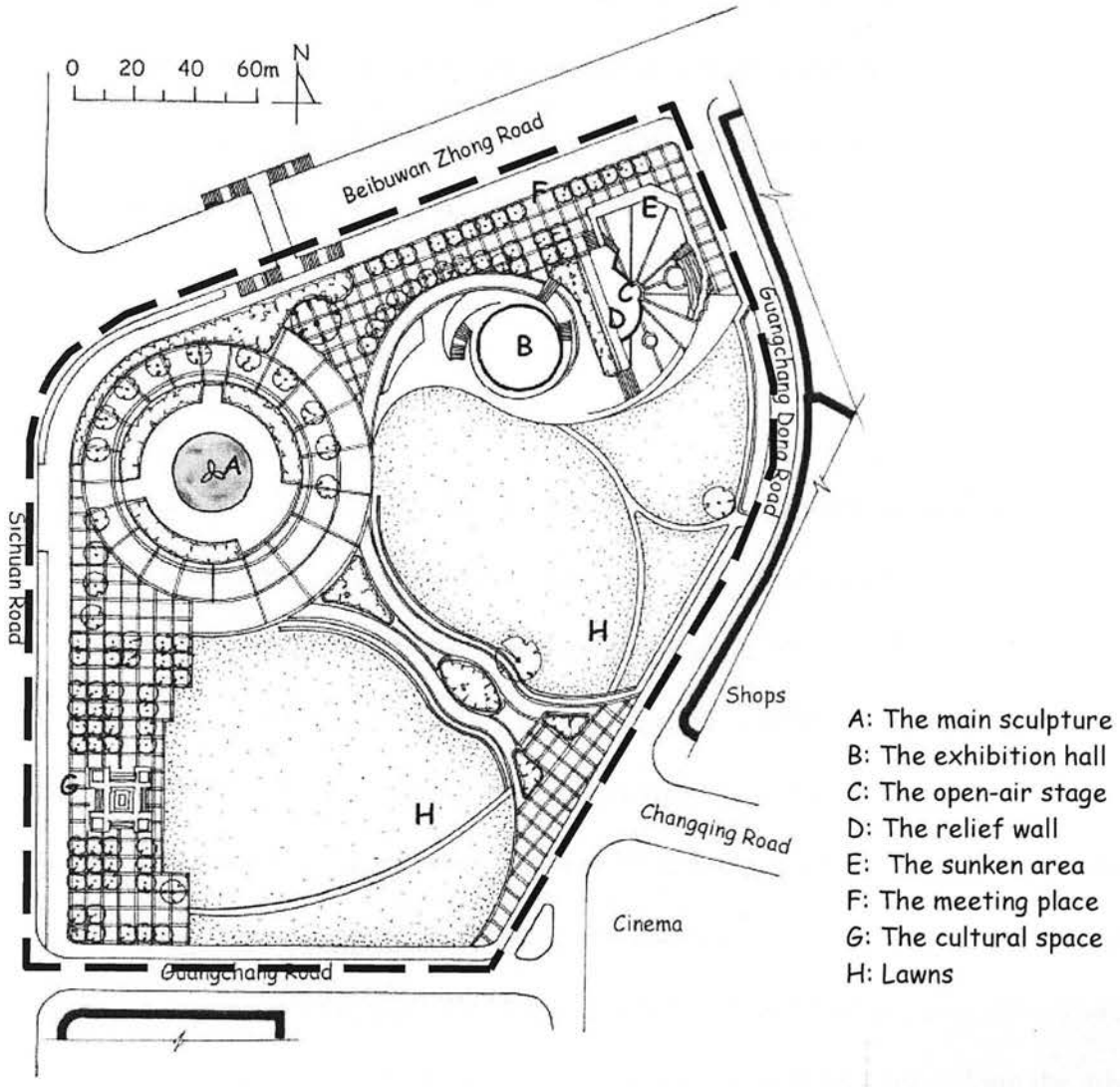


Figure 3.18 Site plan of Beibuwan Square, Beihai

redevelopment designers, were aspects of lack of activity, and lack of facilities of distinctive seashore character (Shu & Su 1998).

The renovated project of the square was finished in 1998. The area was enlarged eastwards to cover nearly 4.1 hectares, and connects with Changqing Road. East Guangchang Road and Guangchang Road, two new traffic roads on the other two sides,

isolate the square from its surrounding buildings. The design also kept the sculpture, trees of friendship and the banyan trees and transferred a reservoir with a vault-roof into an exhibition hall, the renovation considered the local climate and custom and the needs of different activities, which are accommodated in a plan based on three sections (figure 3.18).

Description

The central core, which includes the hard surface area around the main sculpture and the axis, extends eastward to form the nucleus of vision of the surrounding open space and the walkway connecting northwest and southeast for pedestrians. The meeting space along Sichuan Road is set up for people getting together or leisure activities. The cultural space along Middle Beibuwan Road provides space for cultural activities, such as holding exhibitions in the hall or weekend musical parties in the sunken area. Hard surfaces are now dominant in the two sections, enlarged to 40 metres wide (including pavements) on average, and increasing the space for people's activities. Tall broadleaf trees spread over the areas do much to soften the hard surface area, providing shade and making the area much more comfortable (figure 3.18.1). Together with palm trees on the other side, they provide a mild sense of vertical enclosure. Wooden benches in the cultural space and marble stone benches in the meeting space collectively form the square's dominant seating area on the street level and its variety of orientations allows individuals or groups a choice of seating arrangements. Two existing sunken platforms forming the basis of a fan-shaped sunken subspace were developed into an open-air stage with the background of a relief wall embellished with falling water. A series of step ledges on the opposite of

Figure 3.18.1 Banyan trees have been planted to provide shade to cover the hard surfaces. It is not difficult to imagine how comfortable it would be to sit there when the trees all become mature. (Source: the designer, Long Su)

Figure 3.18.2 Sitting area with tree canopies (Source: the designer, Long Su)

the stage can be used for sitting and watching. Two lawns with groves in the third section extend to the western and southern edges, to make up the rest of the square and provide green colour background.

Analysis

Under the dense shades of the banyan trees, people always gather for morning exercises, playing chess or cards, or sitting watching and chatting (figure 3.18.2). The sunken plaza becomes a popular point when performances are in process. Only the lawn areas protected by a peripheral hedgerow seem very quiet and lonely in contrast with the lively and intimate shady area. The renovation of the square brings new vitality to the urban landscape and to urban life, but the linkage of the enlarged site to the surrounding shops and cinema has been cut off by new traffic roads, reducing the opportunity to enrich utilisations, such as outdoor tea bars or terrace food serving, and also makes these facilities somewhat inaccessible to shoppers or cinema visitors. Moreover, lawns border the edges could be seen expressing similar rejection as there is no freely accessible open space along the new traffic roads. Thus the enlarged site, for all its positive gestures, suffers the same problem of other large scale squares in Chinese cities. However, although the square has not shaken off the conventional axial pattern and isolation from surrounding buildings, its free-style of layout, utilisation of original conditions and consideration of climate are decisive to the square's popularity and social value.

3.3.7 **Liberation Square** in Kunming

Location and context

Kunming, the capital of Yunan province in the southwest of China, is sited at an elevation of 1890 metres, has a milder climate than most other Chinese cities and therefore boasts the beautiful name of 'Spring City'. The pleasant climate provides its citizens pleasant natural conditions suitable for spending time outside.

Liberation Square is sited in the city centre, with the Liberation Hall behind and open to the main artery (the Mid-Renmin Road) at its southern side. The surrounding buildings are of mixed use, including of residential, offices and shops. The Liberation Hall is one of the historical buildings in the locality and another historical building, the Wen Temple is visible to the northeast. Therefore, this area is also considered as a historical core. The Liberation Hall dominates the square and is the main conference centre of the city. The name 'Liberation' of the plaza comes from it.

Description and analysis

This urban square was once a parking place mainly serving the needs of conferences. Underground parking existed before the urban square was created in 1998. The layout is composed of three parts (figure 3.19). Two paths lead from the main street to converge in the middle into a central paving area connecting with the entrance of the Liberation Hall, and forming a hard surface area. Two car parks lie separately on the two sides and grasses cover the rest of the area. A sculpture erected in the middle of the space becomes the visual focal point. A flower clock of 10 metres diameter and 2.5 metres high is another piece of artistic work decorating the plaza. The ledges around the lawns and

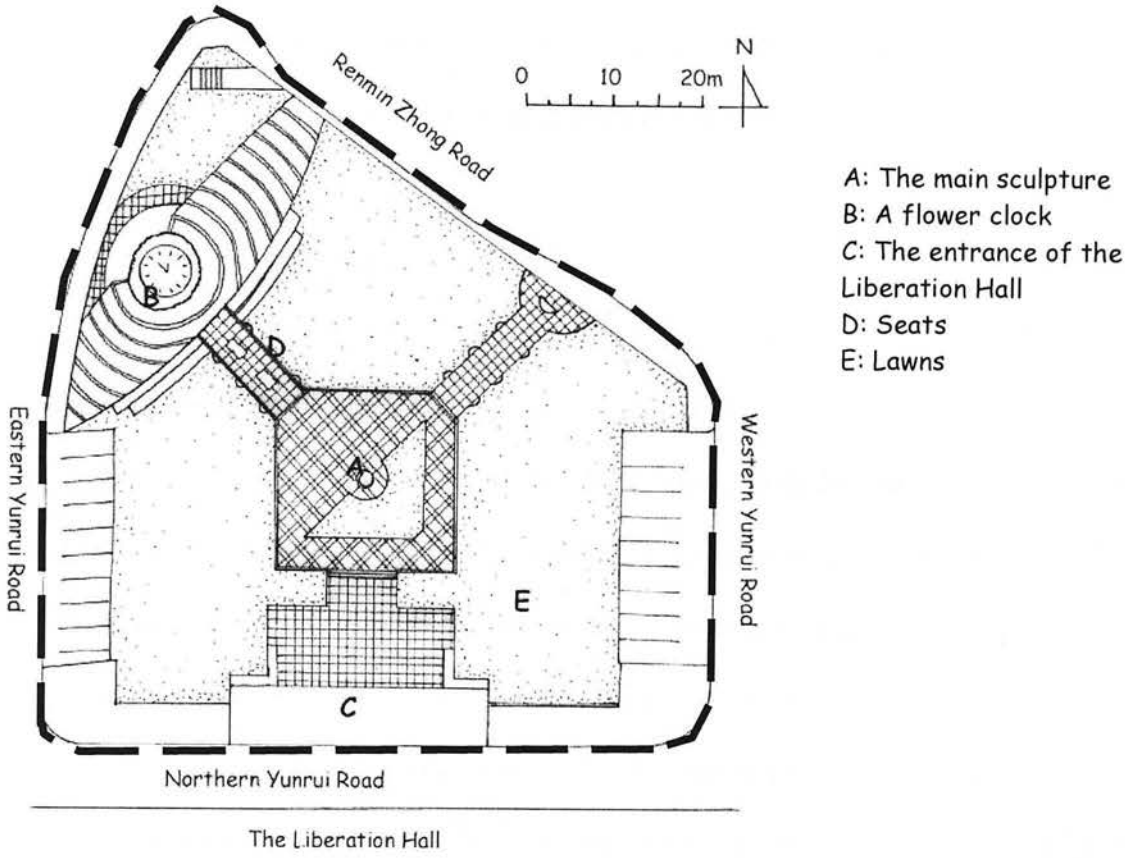


Figure 3.19 Site plan of Liberation Hall

semicircular benches provide different sitting areas but there is no tree cover. The reason, the designer Xue-hanYang told the author (interviewed by telephone on 30 May 2003) is that the underground structure is only 0.9 metres below the ground and therefore there is no condition for tree growing. Although Kunming has pleasant temperature through a year, people living here still need shade to avoid low-angle sun-radiation at the time of outdoor activities (interviewed with inhabitants by telephone on 1 June 2003).

Although the need for shade differs among cities, poor conditions for tree growing is a general problem many designers face in urban square design and they resort to covering

grasses as a result. This is often made worse by underground and ground level designs that are divorced from each other, removing from the palette of urban square design an essential tool for public use or for urban landscape enhancement.

3.3.8 **Peony Square** in Luoyang

Location and context

Luoyang, in the middle reaches of the Yellow River valley, was the centre of the Chinese world before 10th century AD and has been redeveloped as an industrial city since 1950s. Luoyang peonies are well known for their many varieties and long horticultural history. The Peony Festival held annually from April 15th to 25th is the one of attractions of the city. 'Peony' is the symbol of the city and used as its popular name as well. Peony Square was transferred from Jianxi Garden in 1994 and, despite its present name, has little that connects it with peony. The 96 metres in width and nearly 750 metres in length, 7.2 hectares narrow belt is isolated by traffic roads on all sides (figure 3.20). It is not so much like a square as a long garden or park and its eastern end is the starting point of a wide tree-lined boulevard. Buildings running along it are mixed uses of residential, offices and hotel, it is not far from the city's hi-tech zone, industrial district and shopping area.

Description and analysis

The square has been considered as an important public space for cultural expression and relaxation. Openness, new features and high quality were the design principles pursued (Zhu 2002: 41). However, although the area dominated by lawns enhances visual

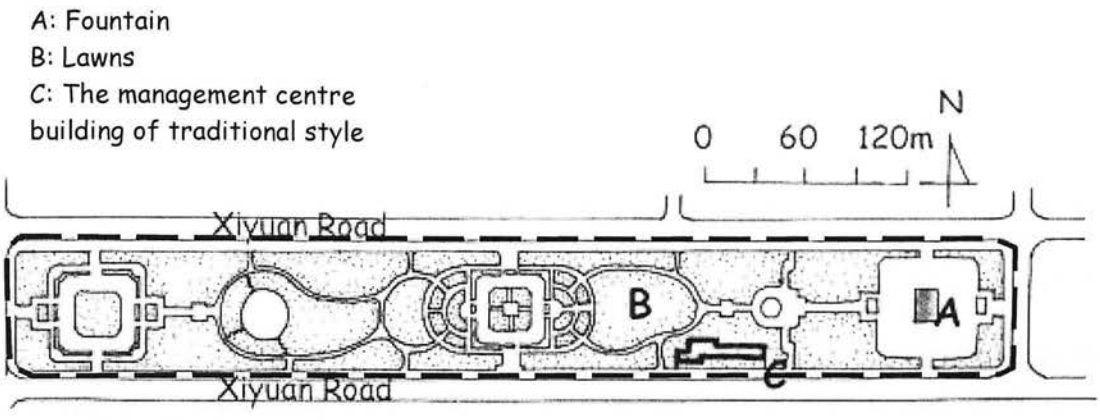


Figure 3.20 Site plan of Peony Square, Luoyang

openness, the new features of the fountain and illuminations might increase the quality of the square, the peony pattern of the paving and the adaptation of local stone material might indicate a main theme and the management centre taking shape of traditional Chinese style might remind people of the city's antiquity, none of these factors are essential to an urban square.

The openness is not useful to provide a relatively healthy environment in the midst of traffic noise and pollution. The only vertical extension of the square is the fountain but it is far from becoming a focal point physically and psychologically. Although there are many entrances along the belt for convenient access, there are only cross-strips at the two ends of the belt. Several hard paving grounds, a fountain section, a flower terrace, a stage and peony platform have been incoherently arranged in the square without reasonable connections with their surroundings. There are some benches but these are mechanically oriented along the peripheries of hard paving and only suit individual, not group, use. There are few shady trees along the paths or around the benches and the connecting paths

have very little shaded covering, effectively creating a waste land in the hot days of the city's long summers.

The location of Peony Square is better suited for a green traffic island, but not an urban square for activity and meeting as originally it was. This perhaps is an example to show designers and developers so keen on achieving an 'urban square' how to even neglect the conditions for an urban square.

3.3.9 **Luyin Square in** Chongqing

Location and context

Luyin Square is one of the most popular public spaces that the author visited. It is an L-shaped space totalling 1.56 hectares located in the busiest area. A traffic road separates it from the Northern Railway station and skyscrapers border its other sides (figure 3.21). According to the functions of surrounding buildings, the design layout divides the square into several sections.

Description

One arm of its L shape lies in front of the Liyuan Hotel, a green area that hides the bustle of the station behind its plants, forming a relatively quiet and peaceful space. Another arm extends along high-rise residential buildings with hard surfaces leading through the main entrance area joining with the path through the green area, then diverging in two directions, one to a shopping district, another across a shady seating area toward the end

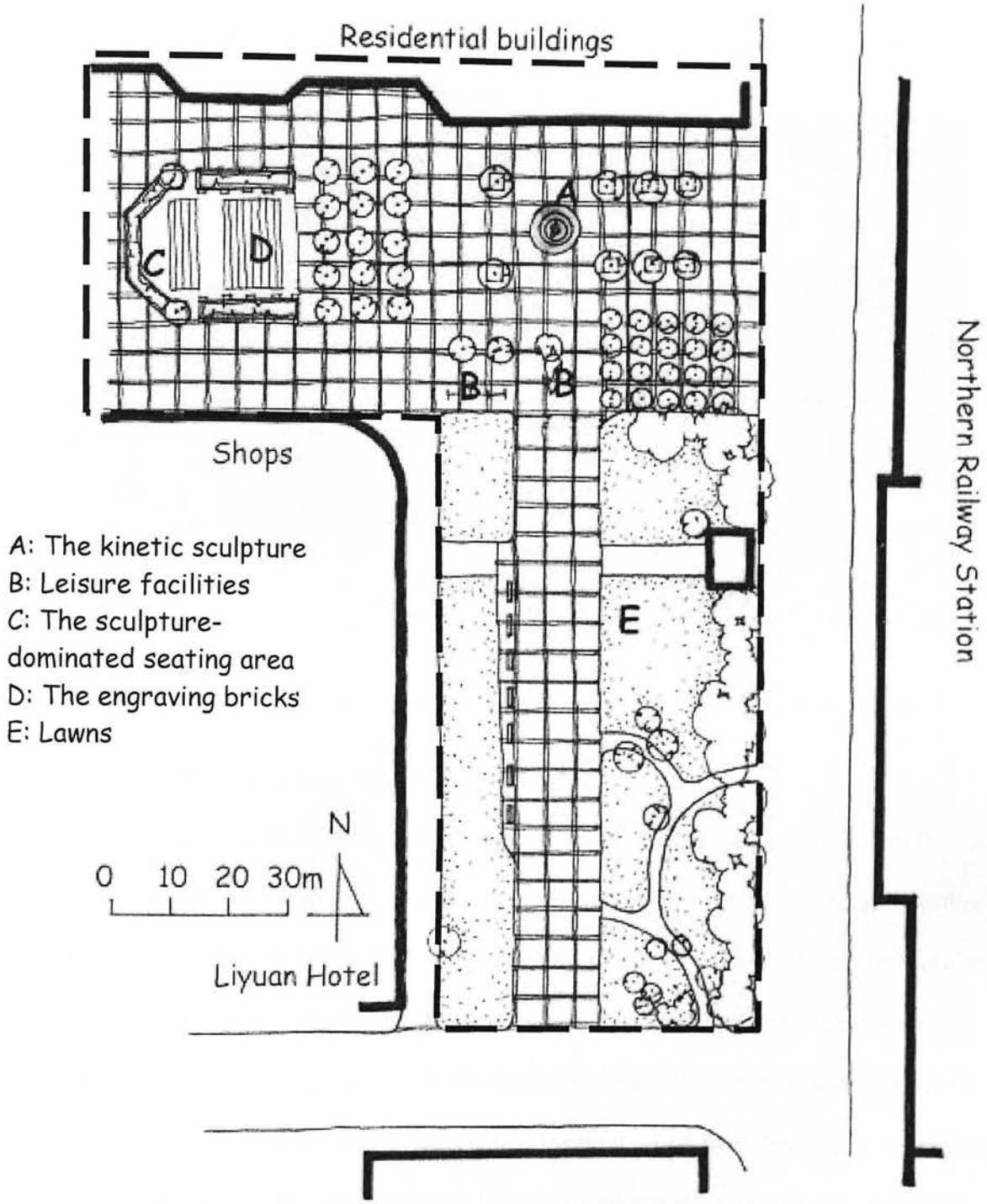


Figure 3.21 Site plan of Luyin Square, Chongqing

of the square which is dominated by sculptures. The main entrance area is symbolised by

two large topiary trees (figure 3.21.1), and leads past four new removed mature trees that are supposed to shade the area. Its centre is a set of fountains with hidden heads and a

Figure 3.21.1 Two bonsai trees symbolise the main entrance and also indicate the square located in Southern China.
(Source: the author October 2002)

kinetic sculpture (figure 3.21.2), and ends in stylised male figure sculptures. Its south side is a seating area with a group of clipped trees, which transfers from hard to soft surface space and quiet to private. At the joint of the main and secondary path several leisure facilities bring lots of funs to children and teenagers. The sculpture dominated seating for the area is screened by high hedges, which block the noise of the crowds and separate the seating for people into two groups. The sculptures draw ideas from famous persons who have contributed in each aspect of social life and development in history and have some close relations with the local society. The engraved bricks show nationwide events of the

twentieth century (figure 3.21.3), which, working together with the sculptures, fuse their themes of history and education in open space.

Figure 3.21.3 The paving bricks with engraved records of events always attract people's attention.
(Source: the author, October 2002)

Figure 3.21.2 The set of hiding head fountains is not a water view for appreciation only.
(Source: the author, October 2002)

Figure 3.21.4 Various sitting areas

Lawn edge seating area, located at the corner of the square, is a place for those whom need quiet surrounding.

Shady treed seating area has benches and flexible seating.

Clipped trees seating area is quiet and without path going through.

Seating area along main passing way where people sitting can watch other people going by.

Analysis

From morning to night, Luyin Square is always filled with users. It is a popular space for people of all ages. Its spatial enclosure engenders relative openness but not vastness. Its direct connection to the surrounding buildings makes it accessible and open to various users as a genuine social urban space. Its location is decisive to its part in people's daily life. Its variety of green and hard-surfaced subspaces satisfies different needs of users, and its generous provision of diverse seating, benches and raised lawn kerbs express invitation to people either as individuals or groups (figure 3.21.4). Simple leisure facilities meet the intuitive wishes of children and are much played with, hence enhancing the family sense of an urban square (figure 3.21.5). Flower planters made of bamboo, sculptures of local famous persons and adaptations of native plants familiar to local people also enhance local distinction. Shady trees and tiny fountains which jets their water from the ground level keep people connected with nature and comfort staying with people, soften hard surfaces and cool the temperature effectively, which is especially important to such a city well known for its long and very

Figure 3.21.5 People of each age could find something appropriate to their interests to enjoy with.
(Source: the author, October 2002)

hot summers. Additionally, the enjoyment of playing among the fountain embodies the modern idea of multi-functions of design elements.

The Luyin Square is a highly successful urban space in terms of location, spatial enclosure, human scale, characteristics and public art. It is a precious and rare example that indicates urban square construction arriving at a mature stage.

3.3.10 **Pearl Square** in Hefei

Location and context

Hefei is the capital of Anhui province, its centre of policy, economy, science and education. It is one of the first group of cities to obtain the title of 'national garden city' and 'national sanitation city'. The economic technological development zone started to be built in 1994. There is a population of 100,000 at present and in the near future. The main body of the new town of Hefei is reclaimed wasteland outside the original urban area and Pearl Square is the core of the new district, occupying 0.9 hectares (figure 3.22). It is by a hotel, a residential area, offices, leisure facilities and public open space. The design principle is to "unify and harmonise the human, and architectural environment, with an emphasis on improving the cultural setting" (interviewed with Mr Ping-tai Du, the head of local government by telephone on 3 June 2003). At present, the building of local government office, a five-star hotel, three residential buildings, central fountain plaza, a commercial street in the European style and tennis courts have taken shape.

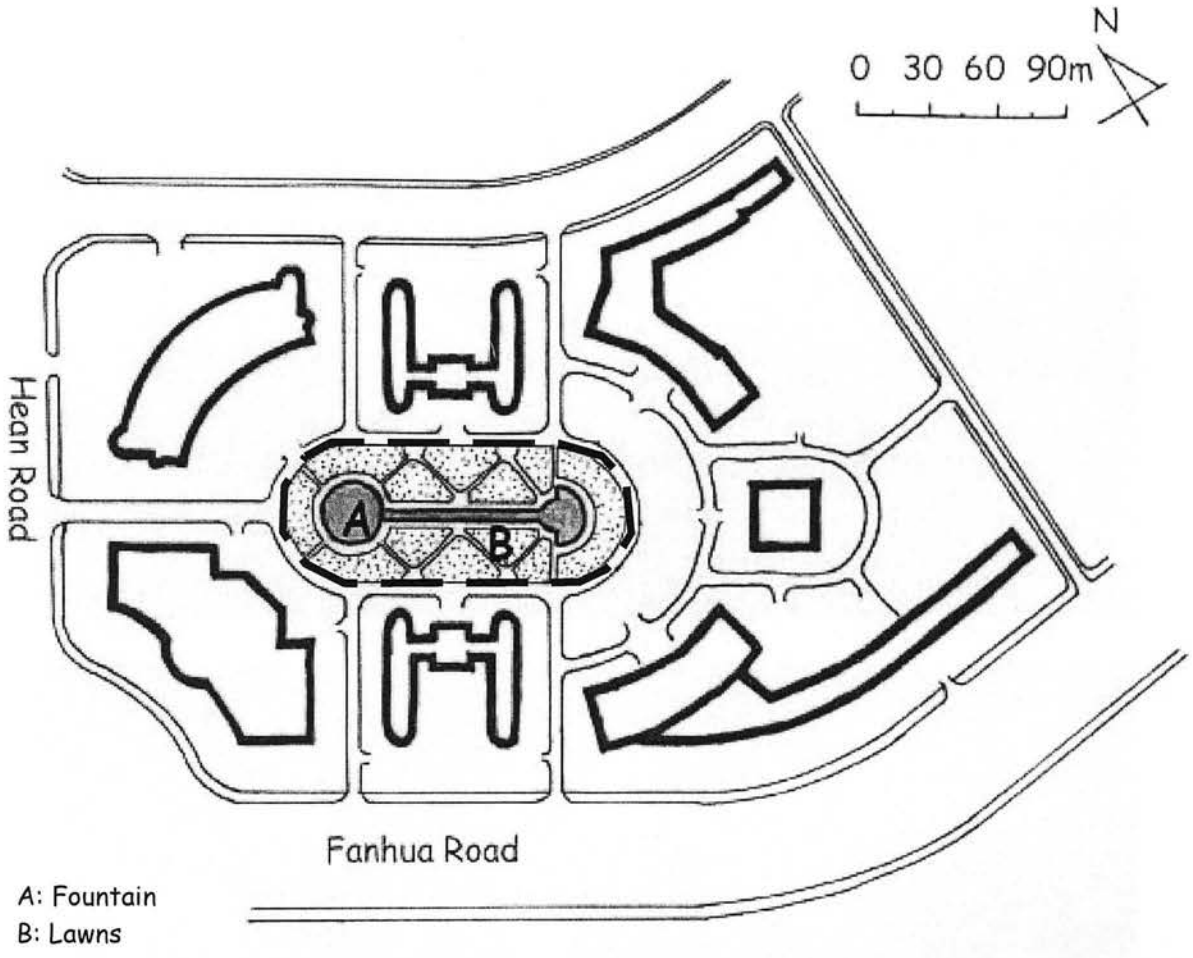


Figure 3.22 Site plan of Pearl Square, Hefei

Although there are arguments about the incorporation of a European style in the new district design, which comes into conflict with local culture, the original intention of application of European style is for attracting western investment (Mr Ning, one of the designers explained in the telephone conversation with the author on 4 June 2003). Nonetheless Pearl Square is a rare example in new developed districts in many Chinese cities for its modest scale and spatial enclosure (further discussed in Chapter 5). The total 10.82 hectares new district has been considered as a whole.

Figure 3.22.1 The views of Pearl Square is, green space, and beside the Main street of European style and illuminated fountain at night
(Source: the designer, Po Ning)

Description

The central fountain plaza is the public space of this area. It is a rectangle with semi-circle at two ends of 150 metres in length and 60 metres in width, surrounded by buildings of post-classical style standing one by one outside the circling road (figure 3.22.1). The plaza follows a geometrical symmetrical pattern. Its circular fountain pond, water canal and semi-circle sunken stage form an axis in the middle, paths connecting these across lawns to the circling road. The designers noticed that the square itself and the surrounding buildings all have large scales. To deal with this, they employed the tactic of enriching the details of the facades and divisions of the space, using ponds, the sunken stage, trees, hedges, wooden fences and paths to create a comfortable sense of scale. Moreover, the adaptation of natural elements, trees, flowers, lawns, water, goldfish swimming in the pond and pigeons walking around enhance the amenity and provide a dynamic and static charming (Meng *et al.* 1998).

Analysis

Since the plaza has taken into shape, this place has become a popular view spot of the city. Bo Ning explained the main reason that citizens welcome it is that its new approach totally differs from the old. Additionally, fountains, cascades, music, bells, pigeons and goldfish enrich visual, acoustic and tactile interests. He further mentioned that the plaza attracts many visitors, especially citizens from this region who come here for leisure and relaxation, (but only at weekends or during holidays). He believes that, attendant upon

the trees' growing and the construction of the new district gradually being implemented, the plaza will be popular every day.

The ratio of utilisation is another obvious issue of the central plaza. The plaza is sited in a new developed, not a densely occupied area, which lacks the characteristics of urban context. As the plaza only has citizens coming in during the daytime of weekends or holidays, the large-scale fountain only spurts water only at certain times or occasionally shows its vitality when there are some local government visitors. Keeping off the lawns is not difficult to fulfil in the plaza, as visitors are limited. This issue evokes Heckscher's (1977: 145) question about Lake Anne Square (in the new town of Reston): "does the artificially created central place become truly alive as populated areas grow up around it?"

3.3.11 Leisure Spaces summary

The appearance of leisure squares undoubtedly brings new content and vitality to urban life. Its fundamental function requires more consideration of the needs of the public and daily life and indicates the differences between 'thematic' and 'assembly and disperse' squares.

3.4 Conclusion

This chapter has analysed a total of 20 urban squares (table 3.01) based on three types and covering the north to the south of the country, ten provinces and sixteen cities. Each case study briefly introduces the background of each city in urban context, sketches out the principles and layout of the design combined with the explanations of designers and the perceptions and utilisation of users, outlines general issues and makes deeper analysis of the more pertinent. The case analysis thus only occasionally refers to design details such as furniture, public art and design for illumination, although they are important parts of urban squares; as this research concentrates on the basic attitudes of urban squares, the focus is more about spatial enclosure, scale, relations with surrounding buildings and utilisation. The issues exposed in the case studies include the model most designs followed, the problems caused by over large scale and the separation of urban squares from surrounding buildings and these are discussed in the next chapter.

Table 3.01 The information of Chinese urban squares involved in case studies

Category	Name	Size (ha)	Year of Construction	Location	City/ province
The Thematic Site	The People's Square	8.00	1992	In front City Hall, city centre	Dalian Liaoning
	Huiquan Square (Southern part)	5.50	1992	The joining of old and new district	Qingdao Shandong
	The People's Square	9.00	1994	In front City Hall, city centre	Shanghai
	May 4th Square	10.00	1997	In front City Hall, a new district	Qingdao Shandong
	Dragon City Square	12.60	1997	In front City Hall, New district	Shenzhen Guangdong
	The People's Square	2.82	1997	In front City Hall	Chongqing
	The Civic Square	4.20	1997	In front City Hall, New district	Jiangyin Jiangsu
The Assembly and Dispersal Hubs	Shenyang North Railway Station Square	2.45	1998	North Railway Station	Shenyang Liaoning
	Shijiazhuang Railway Station Square	5.28	1997	Railway Station	Shijiazhuang Hebei
	Zhongshan Square	2.20	1995	City centre	Dalian Liaoning

Leisure Spaces	BeiBuwan Square	4.10	1995	City centre	Beihai Hainan
	Ancient Tower Square	4.40	1995	City centre	Xian Shanxi
	Pearl Square	0.90	1996	City centre, A new district	Hefei Anhui
	Cultural Square	21.25	1996	City centre	Changchun Jilin
	Peony Square	7.20	1996	City centre	Luoyang Henan
	Hanzhong Gate Square	2.20	1997	Old district	Nanjing Jiangsu
	Quancheng Square	16.96	1997	City centre	Jinan Shandong
	Xidan Cultural Square	2.20	1997	City centre	Beijing
	Liberation Square	0.60	1999	City centre	Kunming Yunan
	Luyin Square	1.56	2001	City centre	Chongqing

Chapter 4 The perceptions of users

4.0 Introduction

This chapter is an account of the interviews and surveys which explored the differences in the perception of urban squares between citizens and professionals. These were under taken in order to contribute to a more objective evaluation of urban square construction which may serve as a basis from which recommendations for further development may be drawn. It carries on the attempt to find the answers to the questions which emerged during the case study analysis. Which factors affect citizens' preferences for urban public spaces? What is the nature of citizens' perceptions of evergreen lawns? What may be the significance of any differences in such perceptions?

It was to address these questions that two surveys were addressed, each of which dealt separately with different controversial issues. One investigated users' perceptions of urban public spaces. It aimed to understand users' values and preferences in relation to public spaces. The other focused on their perceptions of evergreen lawns in order to provide suggestions for addressing the contradictory use of lawns in urban squares. The perceptions of researchers and designers, which have already been introduced in tandem with case studies, will be returned to here for the purpose of drawing comparisons.

The two investigations were carried out in Qingdao. Two reasons were involved in choosing Qingdao as the place to hold the investigations. One was that the author had

already worked there as a landscape architect for ten years, and so was highly familiar with Qingdao. Another reason was that two of its squares were chosen for analysis in Chapter 3 as examples of successful and unsuccessful urban squares – thus Qingdao seemed to promise an interesting diversity of perceptions among the citizens surveyed.

Environmental psychology is necessarily concerned with standards of objectivity in its description of phenomena (for example, behavioural phenomena), and yet at the same time such high standards must not come at the expense of losing the subjective meaningfulness of these phenomena. This is the perennial dilemma of environmental psychology, and indeed, psychology as a whole. Typically therefore, research in this tradition employs a mixture of (objective) observation and (subjective) self-report measures – which, taken together, may allow for high standards of description whilst preserving the relative 'meaningfulness' of the phenomena. For these reasons, the research reported here combined the subjective method of repertory grid technique developed from G. A. Kelly's (1955) 'personal construct psychology' with on-site behavioural observation. It is necessary here to give a brief introduction to this method of questionnaire and interview before introducing the surveys and further analysis.

4.1 The theoretical basis and method

Personal construct psychology was developed by the American psychologist George Alexander Kelly in 1955. The basic idea is that "each of us carries in our heads a set of stored assumptions from our past experience. These stored assumptions are axes of

discrimination (constructs) onto which we project the events which confront us" (Aspinall 1992: 1). So these axes of discrimination, or constructs, are what Kelly sees as a sense-making mechanism, allowing us to discriminate among and categorise the events we experience. "If you can understand someone's construct system you can not only understand his history, but you can also make some predictions about how he is likely to behave in a given situation because you know something about what that situation is likely to mean to him" (Stewart *et al.* 1981: 7).

"The personal construct approach (repertory grid interview) is an interviewing technique aimed at discovering a person's construct system" (Aspinall 1992: 1). It is an art of understanding people in which the interviewee is asked to describe selected aspects of her experience in her own terms. The purpose of using this approach was to elicit constructs relevant to how people see, interpret and evaluate public open spaces.

There are advantages and disadvantages in using every technique in environmental studies, and they should be considered and pointed out at the outset. There were several reasons for choosing the grid interview method. First of all, the researcher's influence on the subjects is minimal compared with pre-structured questionnaire techniques. Secondly, the interviewees have the freedom to express themselves and unconsciously limit verbal meanings they use to articulate. This is very important to avoid interviewers' bias in understanding interviewees' expressions. Thirdly, the information interviewees provide may communicate a whole variety of concerns, which is helpful for generating a deeper and more complex network of subjective constructs which may in turn generate other issues to do with how public open spaces are perceived.

The grid technique is a complicated one, which takes time and patience. The investigation takes place in several steps: eliciting preferences for particular urban open spaces, the comparison between at least three of these spaces and the perception of urban open spaces, so interviewees might differentiate between each part. It is better if the interviewees have varied and representative backgrounds. This is very important to avoid the limitation of construct elicitation.

4.2 Citizens' perception of public space

This investigation was carried out in late September 2001. It started by eliciting which public space citizens prefer to spend their leisure time in and which they recommend for visiting, and why. The author was aware of a difference between the two from informal conversations with interviewees concerning element selection. The interviewees tended to prefer places closer to home, but their suggestions as to the places more preferable for tourists tended to be characterised differently. Therefore, if the author was to choose one tendency, the investigation would miss half of the information. Moreover, open public space, as 'the living room' of the city, must surely serve both local people and foreign visitors. The intention to ask interviewees' opinions in relation to both domestic and tourism domains was to enhance the comprehensiveness of information and bring to light responses that would be more informative to designers and developers who care about symbolic and monumental meanings.

Nine public spaces were selected (table 4.01) and these were the elements of the first questionnaire. They are the 3 new urban squares, May 4th Square (A), Musical Square (B), and Huiquan Square (C), the new park of Qingdao Sculpture Park (D), the traditional parks of Zhanqiao Pier Park (E), Luxun Park (F), Small Fish Park (G), the island of Small Qingdao Park and the general park of Zhongshan Park (I). They are maintained by council and are important public spaces. Among them, A, C, E, F, G and I are considered symbolic sites of Qingdao (2000: 125-139). Although many of them are not analysed in the case studies, the enlargement of the range of examples gave samples of different backgrounds of public spaces.

4.2.1 Three steps

In the first part of the investigation, interviewees were asked to name one or several parks or squares that they prefer to visit by themselves and one or several that they would prefer to recommend to visitors. The intention was not to provide a statistically reliable cross-section of public opinion but to conduct a smaller number of interviews in greater depth. In total 50 people were chosen as interviewees of different demographic profiles in terms of age and career in order to touch on the various requirements and perceptions from different social groups. Among them, 25 were females and 25 were males, 3 were children and 37 were adults and 10 were elders (over 60 years old); 15 of them were the colleagues of the author having a professional background and the rest of them were unprofessional people, (in the majority of cases) people whom the author met in public open space in Qingdao. One part of the questionnaire had to be repeated as the author neglected entrance fees as a

factor affecting the citizens' opinions. So interviewees (some new and some not) were reminded to make choices based solely on their interest in each square or park.

Table 4.01The citizens' choices of preference for public spaces in Qingdao

Elements	A	B	C	D	E	F	G	H	I
	May 4th Square	Musical Square	Huiquan Square	Qingdao Sculpture Park	The Pier Park	Luxun Park	The Small Fish Park	Zhong-shan Park	Small Qingdao Park
Citizens' choices	45	20	0	14	28	10	4	25	8
Suggestions for visitors	50	22	0	26	45	23	38	14	22

Note: the figures are accumulated results of citizens' choice among fifty interviewees.

Table 4.02 shows that A and E are the most popular public spaces. All except C, have been chosen at least once or suggested for visitors. This result raises interesting questions (discussed in later sections).

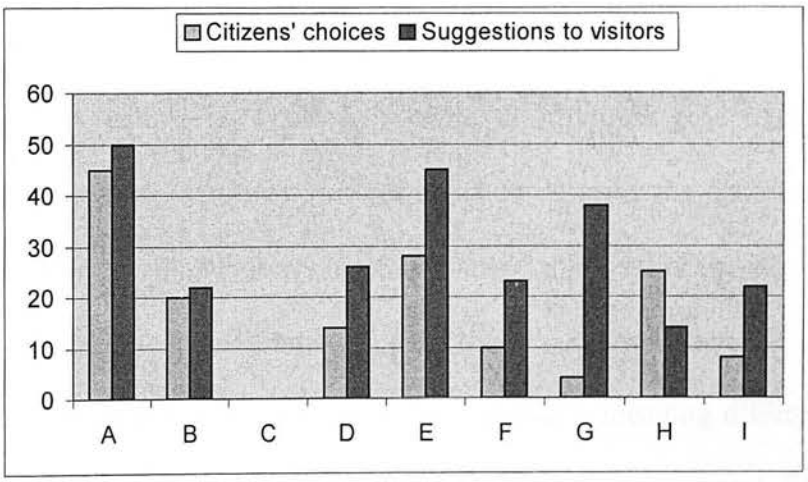


Table 4.02 The preference of visiting public spaces in Qingdao

The next stage is to elicit 'constructs' pertaining to the values behind citizens' choices. A, B, C, E and F were chosen for comparison according to the result of the first part, which shows A, C and E were the ones interviewees like most and dislike

most, and B and F were generally welcomed. The comparison sets are shown in table 4.03[1].

As "reality and what we make of it is built up of contrasts rather than absolutes", the repertory grid technique (Jankowicz 2003: 10-13) was used to understand precisely the perceptions of interviewees. To elicit the constructs of interviewees of their perceptions of public open spaces, the author selected three sets of open spaces for the reasons that A, E and C are at the two extremes of citizens' opinion, while E, F and A are most welcomed by citizens and A, B and C are all new urban squares. Several interviewees were invited to think of similarities and differences between sets of public spaces. They were asked in what way the first two elements of each set were similar to each other and in what way the third one is different. For instance, one of the similarities between A and E is 'symbolic', while the contrast pole of this construct, 'meaningless', was the word interviewees chose to describe the difference between C to A and E. This bipolar construct is an evaluative appraisal of the degree of symbolic meaning of an open space. Similarly, the bipolar construct 'more shade with deciduous trees' - 'less shade with deciduous trees' carries a meaning different from 'more shade with deciduous trees' or from 'more shade with conifer trees'. The former case indicates that there is or there is not shade under the deciduous trees and the latter indicates there is shade under the trees or there is shade in between the trees (because, in such parks, coniferous trees branches come down to ground level). The two bipolar constructs were collected as they are listed in table 4.03 and become the questions in the final step of the investigation.[2]

[1] It should be emphasised that the bipolar nature of constructs does not imply that one is necessarily positive and the other is negative.

[22] The selection of the figures is based on preferences reported on page 170.

Table 4.03 The comparison structures of three sets

Set One		Set Two		Set Three	
Elements	Constructs	Elements	Constructs	Elements	Constructs
A E C	Symbolic – meaningless	E F A	Natural style – Geometric style	A B C	Beside sea – No sea scenery
	Characteristic – Monotonous		Old – New		Soft surface – Hard surface
	Beside sea – No sea scenery		Traditional – Modern		Events – No events
	Like the main feature – Dislike				Popular – Unpopular
	Events – No events				More shade of deciduous trees – Less shade of deciduous trees
	Popular – Unpopular				

The last part of the investigation invited interviewees to reassess the public spaces based on the constructs elicited in the set comparison. Table 4.04 is one of the forms filled in by an interviewee and table 4.05 is the composite result, which demonstrates why citizens prefer some public spaces and not all of them.

4.2.2 Analysis

Table 4.05 shows the total scores for construct preferences summed across the samples. Table 4.06 and 4.07 shows the scores for the single constructs, of soft surface – hard surface and Shady trees – no shady trees. These tables merely contain the same data as table 4.05 but in graphic form for comparison purposes.

Combining the results of table 4.04 with those of table 4.05 reveals which factors most affect interviewees' preferences for public spaces. Four pairs of constructs (in black) show that interviewees' opinions lean to one side and three pairs (in grey) articulate that interviewees' opinions do not lean to one side. The results indicate that

'old' or 'new', 'natural' or 'geometric' style and 'traditional' or 'modern' are not the dominant factors that have a strong influence on interviewees' interest in public space. 'Symbolic', 'characteristic', 'main feature' and 'popular', however, are the key factors in attracting people. Interviewees were then invited to further elaborate on this. They believed that people travel to Qingdao because there is a special characteristic and identity to the city of which its citizens are proud.

The main feature has a huge impact on people's appreciations of an urban square because it cannot be ignored by people who are in the place. It determines their evaluation of the places. The main features of these public spaces are various in forms, sculptures, buildings, fountains and special plants, varied in style, modern or traditional and varied in scale, from modest to large. They can echo or harmonise with the surroundings and local culture, as in the case of May 4th Square exemplified in Chapter 3, but can also conflict with it, as in Huiquan Square, also discussed in Chapter 3. Although some people preferred a quiet place sometimes, they generally prefer to go to a place that is popular and to attend events, echoing the old Scandinavian proverb: "people come where people are" (Gehl 1987: 27). It is common sense.

These two paired-constructs of soft surface/hard surface and more shade with deciduous trees/less shade with deciduous trees carries a meaning different from 'more shade with deciduous trees (table 4.06 and table 4.07) show that all public spaces in Qingdao except Huiquan Square were considered to offer soft surfaces. Huiquan Square is the largest one without shady trees whereas in contrast Zhongshan Park has many shady trees; there are some shady trees in all the others. It would be

inappropriate to conclude from these results that citizens like most of these public squares in general and that strong attitudes toward soft surfaces and shady trees are of little or no importance to such preferences. The reason is that, except Huiquan Square and Zhongshan Park, all are belt-shaped and situated beside the sea. Sea breezes and sea scenery bring a more natural atmosphere. Therefore, even though there are less shady trees or soft surfaces, people would not necessarily suffer from either from the sunshine heat or the hard surfaces.

Those public spaces that citizens prefer to visit share a similar point in that they are all evaluated through the factors of 'characteristics', 'symbolic meanings', 'main features', 'popularity' and 'events'. This indicates that there are interrelations and interactions between those factors. Characteristics could be embodied by main features, to engender and enrich symbolic meanings which could attract more events to take place and make the places more popular. Popularity is one of the characteristics of a public space, and for events a popular place, where more people can join in, is a basic condition to ensure the events are successful. A popular public space gathering local people and local events is better able to reflect urban life and hence make the places characteristic and even a symbol of the urban context.

The investigation illustrates how the factors that affect citizens' preferences may interact. It is not essential that this interaction be embodied in a modern or traditional form, the most important thing is that it is harmonious with all the elements involved in the process of creating public space. The hints and clues already obtained from the case studies and theoretical review point to the salience of daily needs and the importance of human scale.

4.3 Perceptions of lawns

The survey into people's perception of lawns was carried out in early October 2002 in May 4th Square in Qingdao. The questionnaire was based on responses given by twenty people to a pilot question: Do you like the evergreen lawn areas? If so, why? Their answers were all positive and formed the basis for the full survey in which 100 people were presented with these answers and asked if they agreed or disagreed. The 120 respondents were chosen on an opportunity basis by stopping people at random in May 4th Square. They were students, workers, officers, or retired people and aged from 16 to 65.

Table 4.08 shows the results of the survey. Clearly, citizens like evergreen lawns as more than two-third of the respondents, prefer to remain on them. There was a wide understanding that lawns could not be used for walking on in densely populated Chinese cities, so more than half of respondents agreed to keep off. However, all of them absolutely want the lawn areas accessible freely. If we only assess the value of lawns from the support ratio of like to dislike, agreement to keep off, and preferences for remaining on lawns, it seems that the public and designers and developers share a common view. However, the strong appeal of staying on lawns demonstrates the limitation of using lawns, as an urban square, which is a fatal weakness, as it is a place for public activity and public life and such lawns are dominated by evergreen lawns saying 'no' to the public. Even though the public could accept it, the designers and the developers should not ignore it. More discussion focus with more examples, which show other weaknesses of the use of evergreen lawns in urban squares.

4.4 Conclusion

The two investigations elicited interviewees' perceptions of public open space and its design elements. The results imply that urban square design could be improved in the future.

- The factors affecting interviewees' preferences for public open spaces are whether they are symbolic, have a distinctive characteristic, their main feature and their popularity, rather than whether they are old or new, natural or geometric style, and traditional or modern. This indicates that the form of public space is not the dominant factor and that all people could enjoy public spaces that meet their stated needs and priorities.

- There is a mutual interaction among these factors: 'characteristics', 'symbolic meanings', 'main features', 'popularity' and 'events' that affect citizens' preferences.

- Local identity is a very important factor regarding the attraction of locals and tourists. It is why citizens appreciate their city and recommend it to visitors. How to express local identity in urban squares to ensure citizens' satisfaction and enhance their pride of their city is a critical issue that should be addressed in urban square design.

- The perceptions of citizens have of lawns could be described as that they either love them or hate them. It seems that the use of lawns at a large scale in urban squares is reasonable as the citizens appreciate lawns, but the comprehensive analysis in the previous section criticises the excessive use of lawns. How to balance this contradiction between the affection for lawns and their effect of making more than half of the area of public squares forbidden is of great significance for improving the social functions of urban squares.

Constructs / Public spaces		Symbolic - Inexplicable	Characteristic - Monotonous	Traditional - Modern	Natural style- Geometric style	Old - New	Like the main feature - Dislike	Soft surface - Hard surface	Shady trees - No shady trees	Events - No event	Popular - Unpopular
A	May 4th Square	○	○	×	○ ×	×	○	○ ×	○	○	○
B	Musical Square		○	×	○ ×	×	○	○ ×	○	○	○
C	Huiquan Square	×	×	×	×	×	×	×	×	×	×
D	Qingdao Sculpture Park		○	×	○ ×	×	○	○	×	○	○
E	The Pier Park	○	○	○	○	○	○	○ ×	○ ×	×	○
F	Luxun Park	○	○	○	○	○	○	○	○	×	○
G	The Small Fish Park	○	○	○	○	○ ×	○	○	○	×	○
H	Zhongshan Park		○	○ ×	○	○	○	○	○	○	○
I	Small Qingdao Park	○	○	○ ×	○	○ ×	○	○	○	×	○

Table 4.04 An example form of one citizen's preferences viz urban public open space
○ *construct*, × *opposite construct*

Constructs / Public spaces		Symbolic - Inexplicable	Characteristic - Monotonous	Traditional - Modern	Natural style- Geometric style	Old - New	Like the main feature - Dislike	Soft surface - Hard surface	Shady trees - No shady trees	Events - No event	Popular - Unpopular
A	May 4th Square	48	42	50	10 40	50	42	34 10	30	44	46
B	Musical Square		37	50	38 5	50	16	30 5	24	21	28
C	Huiquan Square	44	43	50	45	50	48	45	50	48	48
D	Qingdao Sculpture Park		39	50	3 39	50	24	33	20	10	24
E	The Pier Park	48	43	50	35	50	46	18 25	10 20	42	50
F	Luxun Park	12	43	50	38	50	30	22	25	40	26
G	The Small Fish Park	13	35	50	27	12 38	36	22	35	44	27
H	Zhongshan Park		18	5 45	38	50	40	25	48	28	29
I	Small Qingdao Park	23	35	5 45	37	10 40	38	24	18	39	17

Table 4.05 Results table showing the total scores for construct preferences summed across the samples.
Each case may contain two values, the left value pertains to the top pole of the construct, while the right value pertains to the bottom pole of the construct.
50 interviewees in total, 25/male, 25/femal, 3/age 10-12, 37/age 20-60, 10/age 60-70

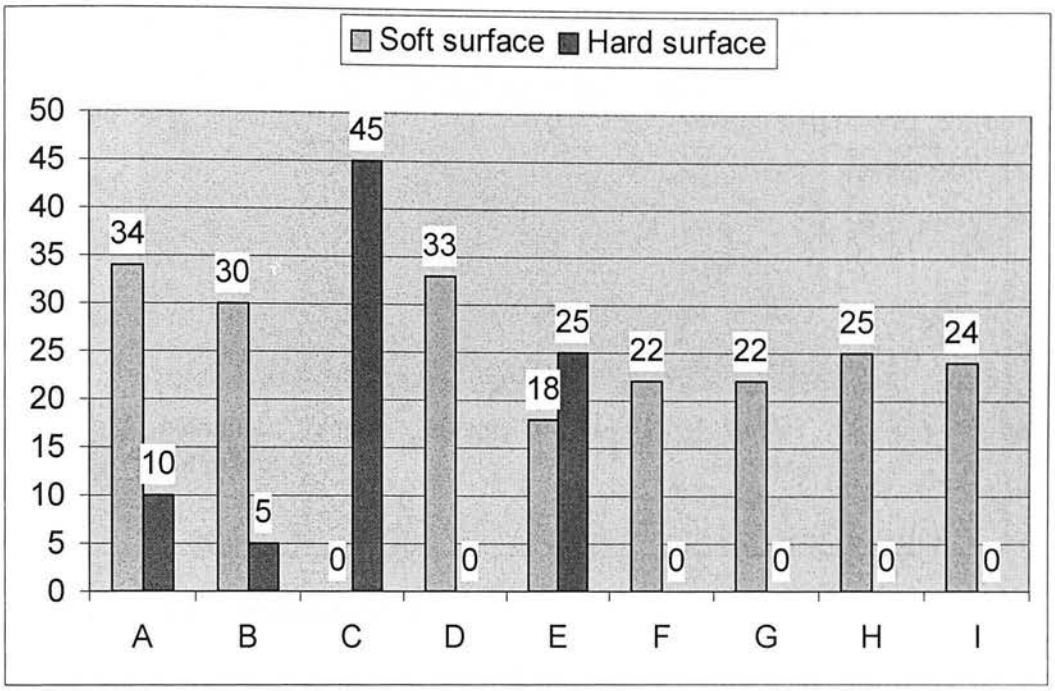


Table 4.06 The total scores of each element on the 'surface' construct

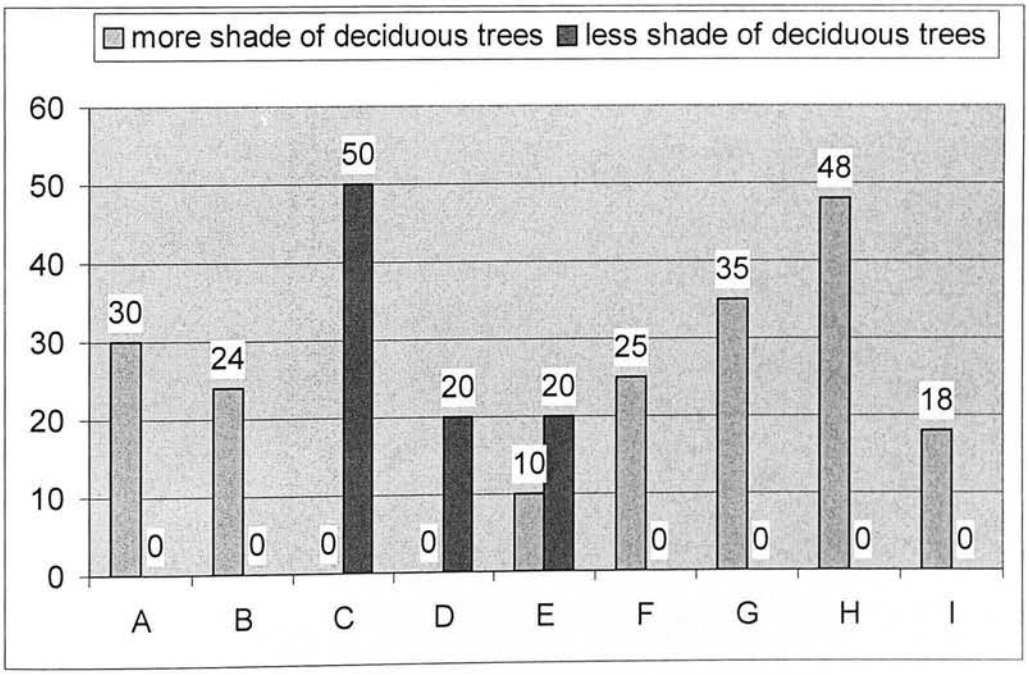


Table 4.07 The total scores of each element on the 'shady-trees' construct

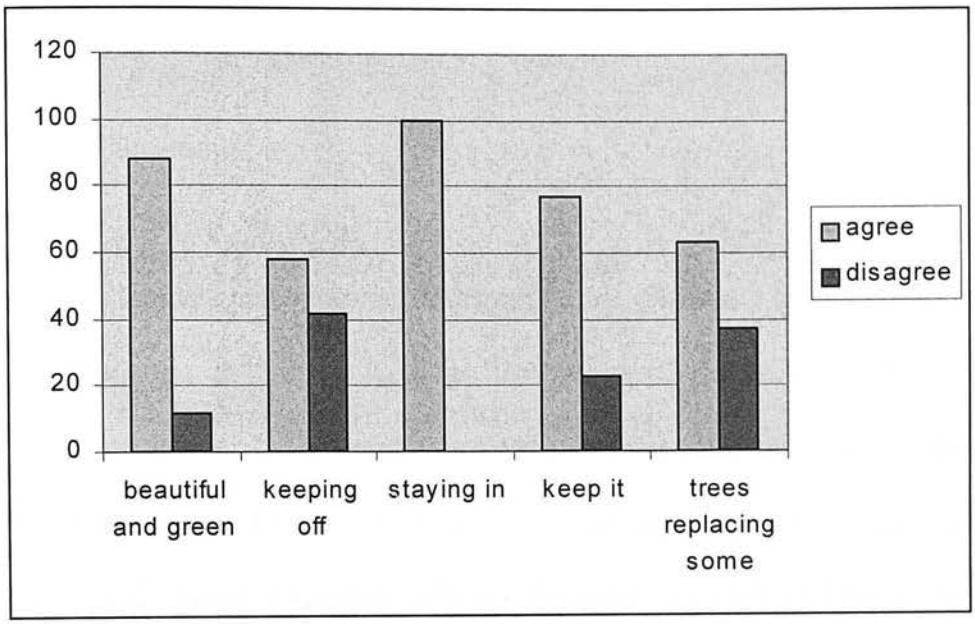


Table 4.08 The perspectives of lawns

5.0 Introduction

Based on the fundamental attributes of urban squares, Chapter 3 analysed a number of cases individually, describing their location, context, design and key concerns. Although they belong to different types with different backgrounds, geographies, climates and positions, they show similarities. China is a large country and has more than a thousand cities and squares. Although the cases described in Chapter 3 are few in number and they are not statistically representative of the whole of China, they do draw forth a range of issues that support the author's hypothesis and form the basis of this study.

This chapter continues the analysis of case studies combined with the results of surveys discussed in Chapter 4, looking further into how western design approaches have been applied. Numerous tables and figures are used to articulate the data from case studies and provide comparative analysis. At first, the emphasis is placed on summarising the respective general findings to show the main tendencies in modern urban square design. The discussion moves on to analyse the strengths and weaknesses of these tendencies measured against the basic attributes of urban squares summarised in Chapter 2. And then explores the problems behind the weaknesses of urban square design. At last this chapter places an emphasis on exploring the reasons behind the issues. The findings of this chapter as a whole will be further discussed in the context of the opinions of Chinese scholars and hence make a significant contribution to the final conclusion in Chapter 7.

5.1 General and common issues

This summary of the common issues is aimed at synthesising the shared characters of each case discussed in Chapter 3. It touches upon the form, the function and spatial relationship and the employment of design elements in urban square design.

5.1.1 Location

Although cases introduced in the previous chapter have varying backgrounds, most of them share a similarity in location (cf. table 3.01). With regard to those transformed urban squares, such as the People's Square in Shanghai and Cultural Square in Changchun, the areas occupied by these squares became city centres as their respective cities developed; the squares even maintained their size as they were transformed into public open spaces. New developed squares, such as Xidan Cultural Square in Beijing, have been planned in commercial areas during the process of reconstruction of city centres. Pearl Square in Hefei may represent the new urban squares built in new developing districts; it is perhaps still too new to be truly 'alive', since the surrounding populated areas will take time to grow up around it. However, the area in which it is sited will probably be the central place used by all people from throughout the district. Only a small group of the cases analysed in Chapter 3, is situated in an area without regular potential users, such as Huiquan Square in Qingdao.

Although the context for urban squares may vary – from old, established city centres to new, potential city centres – they are almost universally positioned so as to be easily accessible, surrounded by heavy traffic, office buildings and residential areas.

5.1.2 Scale

Table 5.01 shows how big is each urban square of case studies. Compared with St. Peter's Square, the grand square in Europe, Cultural Square in Changchun is 7 times as big and Dragon City Square in Shenzhen is 4 times as the area. Of all the cases, only in three was the author able to see simultaneously into all corners of the squares. In 18 of the 20 cases, the length of the squares exceeded one hundred metres and in more than half of the cases the length exceeded two hundred metres.

Many urban squares cannot connect with other public spaces directly. Such urban squares cannot avoid the interruption of traffic roads, as they are very large. For example, both Wusi Square in Qingdao and the People's Square in Dalian, have had to be cut into two halves by roads.

Table 5.01 Comparative table showing the scale and main divisions of each case

Name	Area (m^2)	Length (m)	Width (m)	Lawns (m^2)	Hard surface (m^2)	Water feature (m^2)
Cultural Square Changchun	213,000	469	453	100,000	66,000	200
Quancheng Square Jinan	170,000	780	230	95,000	52,000	3,800
Dragon City Square Shenzhen	126,000	500	211	100,000	23,000	600
May 4th Square Qingdao	100,000	574	220	60,000	38,000	1,700
The People's Square Shanghai	90,000	308	128	60,000	16,000	1,200
The People's Square Dalian	80,000	285	280	52,000	24,500	3,000

Peony Square Luoyang	72,000	750	96	52,000	14,000	600
Huiquan Square Qingdao (southern part)	55,000	245	210	34,000	16,500	2,500
Railway Station Square Shinjiazhuang	53,000	320	230	14,000	32,000	600
The Civic Square Jiangyin	42,000	290	145	17,000	23,400	1,400
Beibuwan Square Beihai	41,000	240	220	18,500	23,000	400
The People's Square Chongqing	28,000	260	120	15,000	11,000	1,800
North Railway Station Square Shenyang	22,000	160	120	1,200	20,000	
Zhongshan Square Dalian	22,000	160	160	17,000	2,400	100
Xidan Cultural Square Beijing	22,000	140	140	11,200	10,000	800
Hanzhong Gate Square Nanjing	22,000	140	120	10,000	9,000	
Ancient Tower Square Xian	22,000	230	95	10,000	11,100	700
Sanxia Luying Square Chongqing	15,600	150/132	60/48	5,200	10,300	100
Pearl Square Hefei	9,000	150	60	5,100	2,400	1,500
Liberation Square Kunming	6,000	85	70	3,700	2,300	

A comparison between the scale of Pearl Square in Hefei and Dragon Square in Shenzhen shows how large many contemporary urban squares are. Pearl Square is 9000 m^2 and is sited in the middle of the new district of 108,000 m^2 in area. It is surrounded by buildings which occupy a space of more than 40,000 m^2 (most of the rest of the land is occupied by green fields) giving the plaza a three-dimensional character. Dragon Square of 126,000 m^2 is a totally open space, its surrounding buildings stand a minimum of 211 metres apart from each other. In Pearl Square, people can clearly see each other's activities and share their feeling. In Dragon Square, by contrast, the huge space has the effect of making people feel 'diminished' in some sense.

However, the urban squares at the scale of Pearl Square are only a minority. This is clearly shown in table 5.01. The fact that the scale of modern urban squares in China is large is an obvious issue.

5.1.3 The typical model of 'a line across three rings'

Figure 5.01 is a set of layouts simplified from the design of Dragon Square in Shenzhen (cf. figure 3.06), Xidan Cultural Square (cf. figure 3.15) in Beijing, Liberation Square (cf. figure 3.19) in Kunming and Spring Square (cf. figure 3.14) in Jinan. Comparing these simplified layouts, a similar pattern is apparent.

Four characteristics are evident in these plans. Firstly, the urban square is an isolated site separated from surrounding buildings by traffic roads on four sides; it has no direct connection with surrounding buildings. Secondly, the design layout is dominated by a symmetrical geometrical pattern. The main hard surface area lies in the middle of the urban square surrounded by lawns, these are positioned variously by fountains, sculptures and flag poles all of which are distributed along the main axis having the principal role of accentuating the main axis. Thirdly, paving and lawns are the two fundamental design elements that structure the surfaces. Lawns generally occupy more than fifty percent of the area. Fourthly the sunken plaza is used to display the change in the surface plane and in vertical direction. It is round or square, deep or shallow but almost always is located in the exact centre of the plane surface, playing the role either of connecting with a wider underground structure or just bringing a change in form. Analysed from a three-dimensional point of view, although the design elements of the platform, ledges, steps, sculptures and their foundations

and the water columns of fountains constitute point changes in vertical direction, compared with the huge and flat site, these urban squares could to be thought as just a hole on a plane surface.

According to the analysis above, a model of landscape design that most urban square designs follow is revealed in the case studies, it is named as 'a line across three rings' in this research. Figure 5.02 shows the particularities of the model in plan and section.

A 'line' specifies the main axis, which is the dominant approach to the square. It is this line which forms the basis of all geometrical and spatial relations between the square and its surroundings, such as the extension of an urban road in the same direction or the symmetrical relations with surrounding buildings. The lawns act as the outer ring enclosing the site from the outside, the pavements act as the median ring and the sunken area, acting as the inner ring, lies in the centre.

The model, 'a line across three rings' is not only a pattern; it reflects the conception of an urban square in contemporary design and the causality with other issues of urban squares.

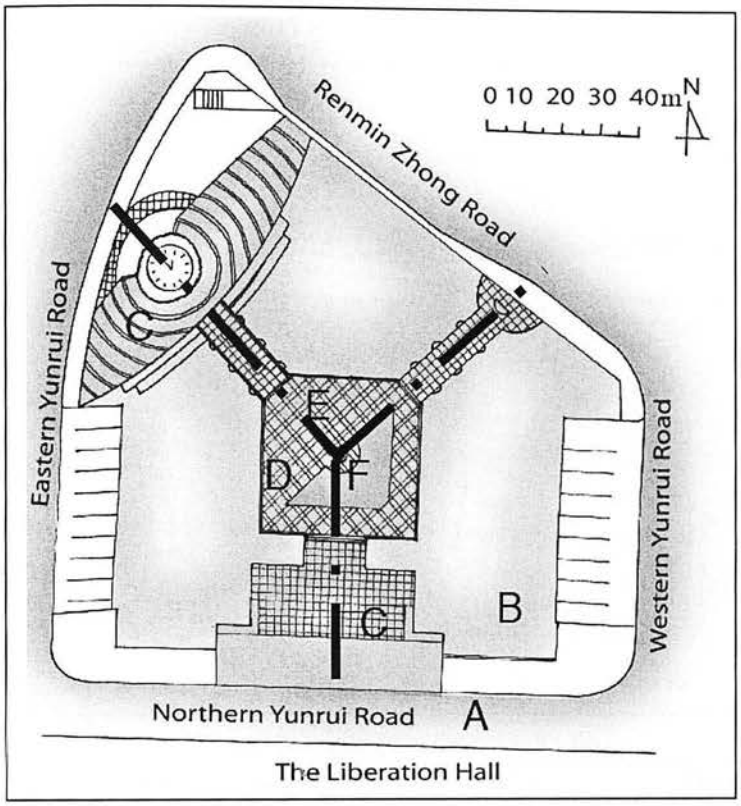


Figure 5.01a The simplified layout of Liberation Square, Kunming, shows that traffic roads separate the site of 6000 square metres from its surroundings; a sunken area is arranged in the middle, surrounded by lawns. A sculpture stands in the centre of the square as the intersection of three routes. (Source: the author 2004)

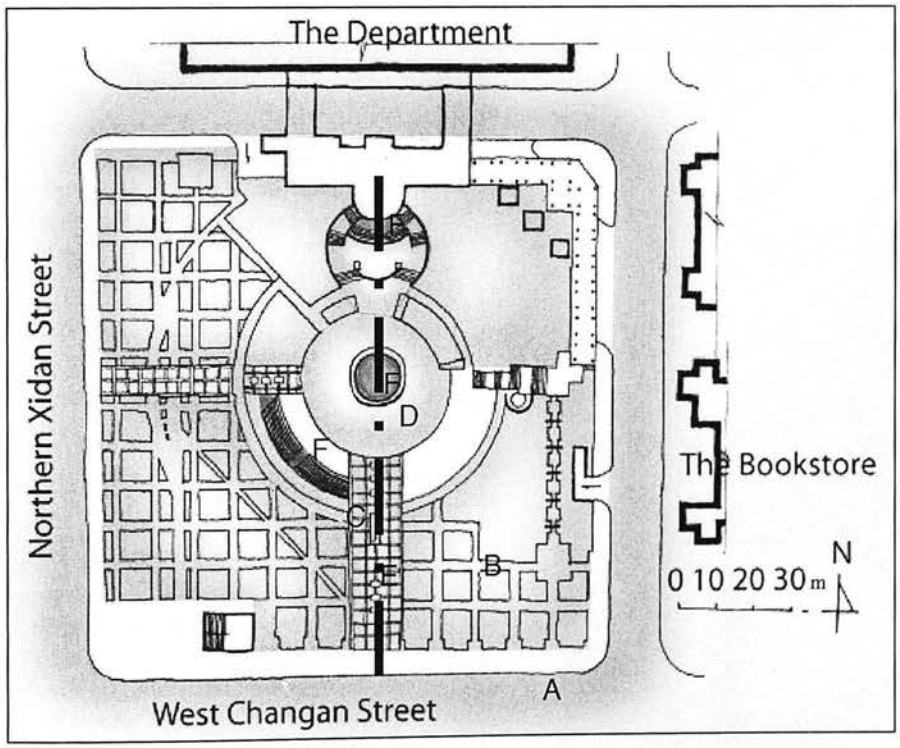


Figure 5.01b The simplified layout of Xidan Cultural Square, Beijing, illustrates that traffic roads (A) separate the site of 22,000 square metres from its surroundings. Lawns (B) surround a sunken area (D) in the middle of the square and the north-south axis (E) constitutes the main route (C) across the square. A fountain pond (F), a cascade water feature (F) and a glass tower (F) lie along the axis.

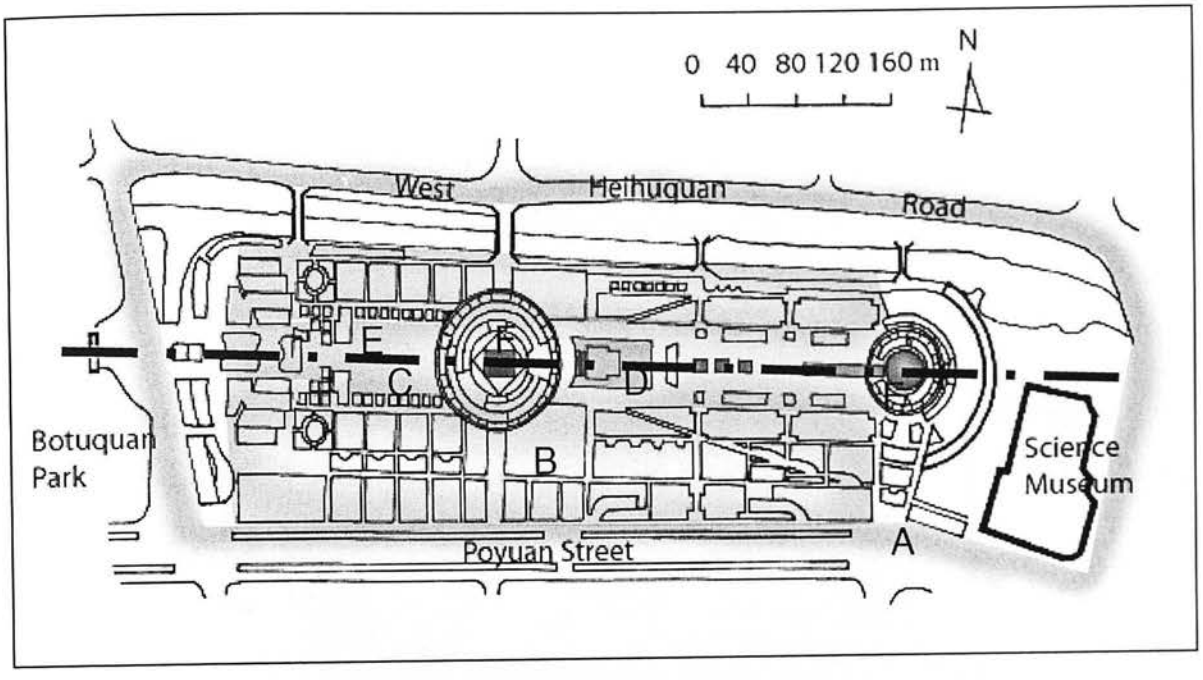


Figure 5.01d The simplified layout of Quancheng Square, Jinan, illustrates that the site of 170,000 square metres has no connection with its' surroundings as traffic roads form a membrane around it. The hard paving area, the main sculpture, the sunken plaza and a set of fountain ponds are lying along the main axis which crosses the square and separates the entire lawn in half.

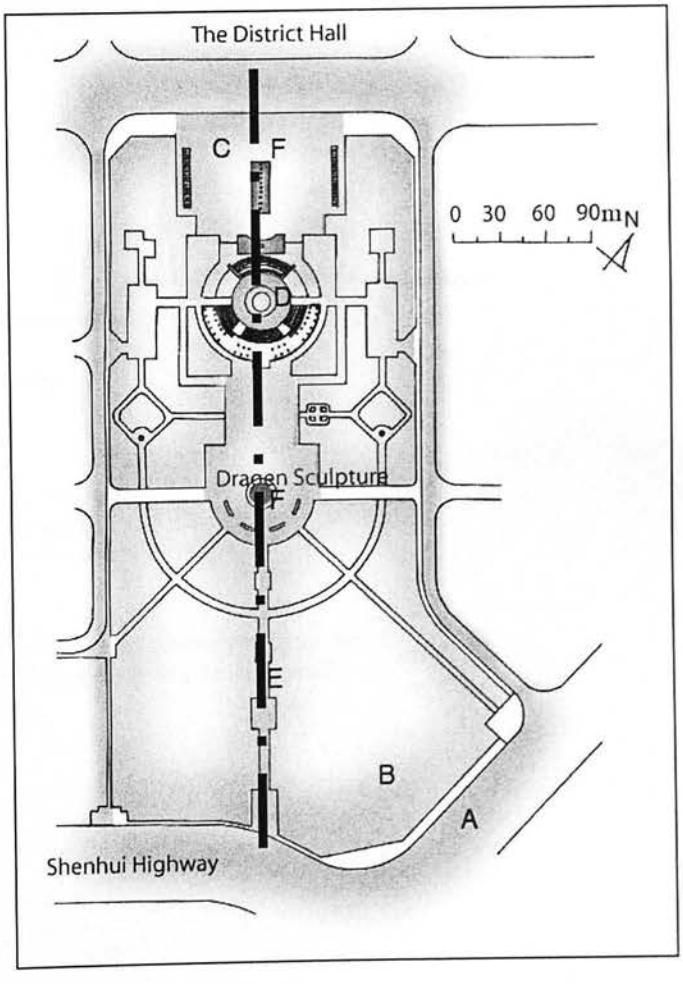
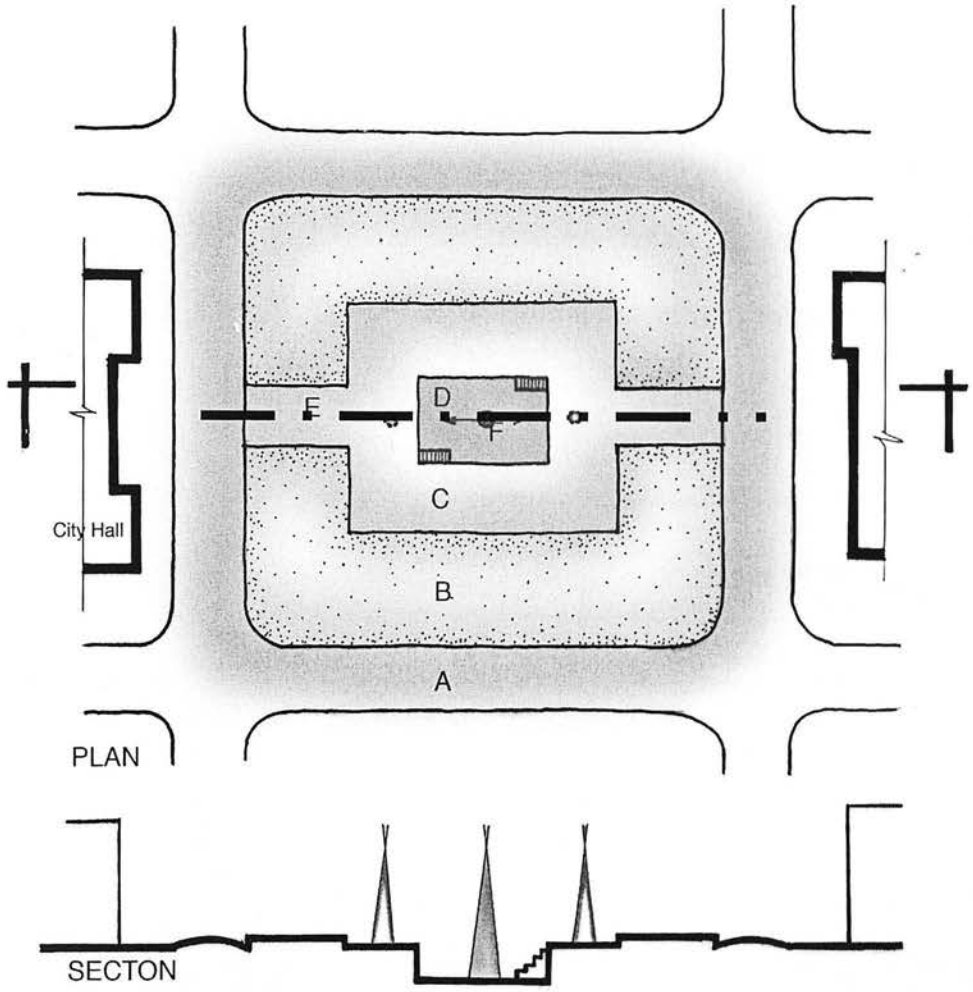


Figure 5.01c The simplified layout of Dragon Square, Shenzhen, shows that traffic roads isolate most part of the site of 120,000 square metres from its surroundings. The hard paving area, two fountain ponds, the sunken plaza and the main sculpture have been arranged along the main axis across the square.

(Source: the author 2004)



A: Traffic roads isolate the urban square
B: The first ring – the lawns
C: The second ring – the hard surface
D: The third ring – the sunken plaza
E: The main axis – the main routine of visiting
F: the main feature – sculpture or fountain in the centre of the square or to be arranged along the main axis

Figure 5.02 General model of urban square design as abstracted from the previous four actual models, irrespective of variations in size and small differences in layout and particular features.
(Source, the Author 2003)

5.1.4 The employment of western design elements

Tables 5.01 and 5.02 show the changes in the application of design elements based on a comparison between previous and new designs. Fountains, sculptures, paving and lawns have been employed variously in modern urban square designs not only in scale and amount, but also in materials and patterns as well.

Table 5.02 A comparison of design elements between previous and new designs

Name	Original use	Previous design	Mainly new component				
			Fountain	Sculpture/structure	Lawn	Pavement	Seat
Cultural Sq. Changchun	Plaza	Vegetation	√	√	√	√	√
Quancheng Sq. Jinan	Factory, school, residence A part of moat Park	Trees Moat	√	√	√	√	√
Dragon City Sq. Shenzhen	Wasteland		√	√	√	√	√
May 4th Sq. Qingdao	Wasteland		√	√	√	√	√
The People's Sq. Shanghai	Buildings, structures		√		√	√	√
The People's Sq. Dalian	Plaza	Indigenous lawns	√	√	√	√	√
Peony Sq. Luoyang	Park	Vegetation paths	√		√	√	√
Sanxia Luying Sq. Chongqing	Buildings		√	√	√	√	√
Huiquan Sq. Qingdao	Open space	Indigenous lawns	√	√	√	√	√
Railway St. Sq. Shinjiazhuang	Open space	Hard surface	√	√	√	√	√
The Civic Sq. Jiangyin	Farm field		√	√	√	√	√
Beibuwan Sq. Beihai	Factory		√	√	√	√	√
The People's Sq. Chongqing	Open space	Pavement vegetation	√		√	√	√
North Railway St. Sq. Shenyang	Open space	Pavement		√	√	√	√
Zhongshan Sq. Dalian	Green traffic island	Vegetation	√		√	√	√

Xidan Cultural Sq. Beijing	Shops		√	√	√	√	√
Hanzhong Gate Sq. Nanjing	Market				√	√	√
Ancient Tower Sq. Xian	Market and shops		√	√	√	√	√
Pearl Sq. Hefei	Wasteland		√		√	√	√
Liberation Sq. Kunming	Parking	Hard surface		√	√	√	√

Paving

The decorative function of paving, though applied in Chinese traditional gardens a long time ago and continually used in modern gardens and parks, has in recent years come to be used in other public spaces, such as urban squares and street pavements. For example, Qingdao started to use colourful materials and ornamental pattern in pavement since the early 1990s. Before this, the pavement materials were selected on a purely functional basis; they had to be cheap, easy to clean and of the right texture for walking.

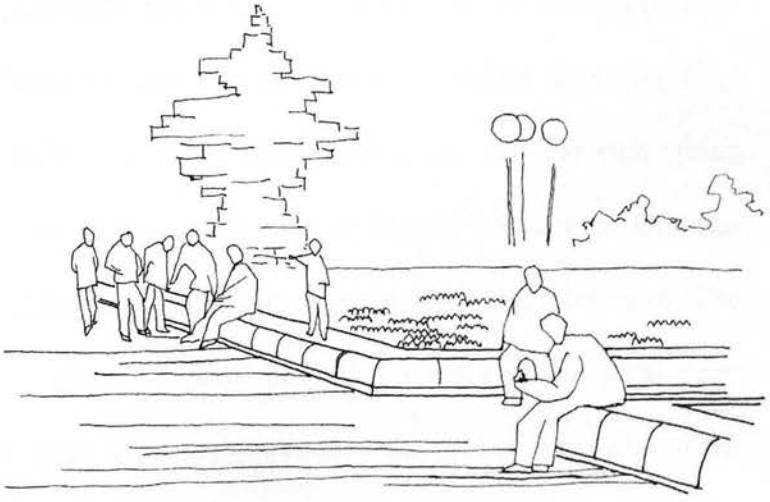


Figure 5.03 Enlarged kerb in size is used as a seating area.

In modern urban squares, paving is used as the basic element to shape the place. Geometric patterns mould its features. This is shown clearly in almost all site plans sketched in Chapter 3. Some kerbs are exaggerated in size to play an ornamental role or a new use, such as seating. The

function of kerb is no longer limited to being the border and protection of pavement (figure 5.03). Various types of stones have come to replace concrete slabs as the main materials to improve the grade of paving, such as polished granite slabs. The geometric patterns, granite slabs and exaggerated sizes embody the order and grandeur of modern urban squares.

Sculpture

Sculptures, large or small, individual or grouped, abstract or figurative, stereoscopic or graphic, static or kinetic, have all been introduced in the case studies in Chapter 3. Most of them express thematic meaning and are built on huge scales, such as the Spring Sculpture in Jinan (cf. figure 3.14.2), the Wind of May 4th in Qingdao (cf. figure 3.07.1) and the Root of Dragon in Shenzhen (cf. figure 3.06.2). Obviously, a strong monumental attitude dominates these sculptures and this corresponds to a tendency toward grandeur of contemporary urban square designs. They also have been dedicated to expressing a specific meaning, for example, the nuclear sculpture of Spring Square in Jinan is an abstract feature of the Chinese character for spring (泉) and spouts of spring water indicate the fact that this is a city that has rich spring resources. The sculpture of 'The Wind of May 4th' in May 4th Square in Qingdao represents the vitality of social development and people's spirit. The sculpture of 'The Soul of Southern Pearl' in Beibuwan Square in Beihai speaks of the local pearl industry. To a certain extent, these huge sculptures play the role of the focus of the open space and add a new feature to the urban landscape.

Despite the striking visual effect of huge sculptures, a tendency toward greater amenities and liveliness has more recently come into sculpture design, embodied in

statues low down to ground level that could be viewed horizontally and touched by hand, such as 'The Reader' in Xidan Cultural Square in Beijing. As street art, sculptures in Chinese cities have never been as rich and various as they are today.

Fountains

Most of the fountains in modern urban squares are built on a large scale and are highlighted by various creative water scenes and colourful illuminations. They also have been designed to express the aspects of local culture, such as the Lotus Fountain in Jinan representing the traditional affection for lotus flowers and the central fountain of The People's Square in Shanghai with a local map as its bottom pattern. Recreational interests have been combined into water features to enrich the purely visual with tactile enjoyment and to bring more vitality to the space. Hidden sprinkler heads have been used to reduce the inconvenience of draining in cold weather and unpleasant scenic effect (to those areas where temperatures are lower than zero in winter). When fountains are in their full performance, they enhance the visual attractiveness of the urban square, although the lack of financial support reduces most fountains to a mere pond with inoperative pipes for much of the time. Fountains have been taken as one of the main components of the scenery for urban square design. Some of them are even considered as symbols of their cities.

Lawn

Table 5.02 shows that although some urban squares in China may be without a fountain or a sculpture, not one is without a piece of lawn. Lawns, like hard paving, are an essential element in urban square designs. They are big or small, wide or narrow and amassed or dispersed, covering more than half the area of each urban

square and opening it up to the fresh air. Only occasionally do trees and shrubs decorate them. These lawns reduce and soften hard surfaces and bring natural vital colour to the space. However, pedestrian access to lawn-covered space is prohibited, even though such space amounts to more than half of the total public space. Public open space is in fact largely inaccessible to the public, a contradictory fact that is very common in modern urban squares. Designers and developers seem to have strong preferences for such design but, compared to the consequences and users' preferences, it may be necessary to rethink the application of lawns in urban squares.

5.1.5 Landscape enhancement

The introductions to most cases show that the modern urban square has been considered a part of a more general urban landscape, in which unity, order and grandeur are the images aimed at through design. Symmetrical geometrical patterns rather than traditional informal style patterns dominate the layout of those urban squares and the expression of such images. Beibuwan Square in Beihai is the only one, among the 20 cases, featuring an informal pattern. Paving and planting design have been emphasised for ornamental effect, colourfulness and decorative pattern and so on. Sculpture and fountain designs seek to impress visually. The sites and the sculptures, fountains, paving and lawns are built a large scale to demonstrate obvious changes in urban structure and urban landscape.

Since it was intended in the designs of most cases that the old features of the sites ought to be replaced – densely packed buildings, disordered structures, industrial sites, schools, houses, shops and so on – new features and new patterns are obviously

needed. The new, replacing features and patterns ought to deliver a striking visual effect, the contrast with the old features ought to be especially pronounced, thus drawing attention to the significance of the apparent change. Such intentions are dominant in design principles and methods and require correspondent action.

A symmetrical, geometrical pattern is easier to view as a whole at a fleeting look and has the power to give a strong impression at the first glance. Moreover, the visual presence of a completely unique feature serves to impress upon citizens the brute fact of large demonstrable change.

Modern urban squares are used as a powerful tool for framing and highlighting the features of cities. They are also showcases of the development of the urban landscape and the achievement of local authorities. They not only enhance the image of the urban landscape, but that of the developers as well.

5.1.6 Leisure use

Providing comfortable outdoor space for people's leisure time is the principle that underlies all kinds of newly constructed urban squares in the survey. Many existing or new urban squares of different types have been transformed from serving a single function or a special event to having a common leisure use. The People's Square in Shanghai and Huiquan Square in Qingdao have been changed from racecourses into urban squares. They used to be places where mass rallies were held and they offered little support for urban life until the 1990s, when facilities such as benches and pavement were added for people's daily use with the intention of encouraging people

to stay. Railway station squares used to play the single role of filtering passengers or traffic flow. Now they are considered as outdoor 'waiting rooms'. The functions of many urban units – streets as corridors for urban movement, residential areas for living, offices for working and parks for leisure are fused together in urban squares. Daily leisure use is one of the most conspicuous innovations of urban square design.

The application of design elements evidences this change. The arrangement of seating areas has become one of the main tasks of urban square designers seeking to supply the necessary conditions for people to stay there. Lawns have come to replace hard uncomfortable surfaces, their natural colour facilitating psychological relaxation. Fountains have been used as tactile attractions whereas once they could only be appreciated as visual features – for example the large fountain pond in Huiquan Square (cf. figure 3.08) (which is only a display of grandeur). They can now be both appreciated and played with – for example the fountain 'patio' (cf. figure 3.07.2) in May 4th Square. Similarly, sculptures as a kind of public art or street art once employed to embellish have tended to evolve in a more tactile and interactive way, such as 'The Reader' in Xidan Cultural Square (cf. figure 3.15.3) and 'the Rift Valley' in Sanxia Luyin Square (cf. figure 3.21.5).

5.1.7 The balance between urban landscape enhancement and public use

Landscape enhancement and use for daily life has just been analysed above as common issues in contemporary urban square construction, but there are phenomena which raise a question about the balance between the two.

Large lawn areas that people are forbidden from using, large hard surfaces without shade, the lack of sitting areas or the lack of variety of sitting areas and poor choice of cold stone seating materials all indicate the preference for landscape effect over the needs of people in urban square designs. Although some cases such as Bebuwan Square in Beihai and Sanxia Luying Square and the People's Square in Chongqing have good seating diversity and orientation, they are rare exceptions to the general trend.

The combination of appreciating and being able to play in water features, can be see in The Light of Pu River' in the People's Square in Shanghai, the water-phalanx in May 4th Square in Qingdao and the set of fountains with hidden heads in Sanxia Luying Square in Chongqing. However, displaying grandeur for visual appreciation dominates the application of features. They are usually built at a large scale or positioned as the focus of attention but they rarely fit with local or social conditions. Zhongshan Square in Dalian, for example, has a centrally positioned fountain which could be enjoyed visually by people standing within the square despite the surrounding traffic noise – though if the fountain were positioned around the inner perimeter between the people and the outside traffic, the sound of the flowing water would perhaps muffle the traffic noise. Just such a change would be an improvement to the micro-environment. Similarly in Spring City Square in Jinan, although the fountains and ponds extend to more than 7,000 m^2 and mature trees can provide shady covering 15,000 m^2, they are insufficient to the task of cooling more than 60,000 m^2 of hard surface, let alone to improve the microclimate in a whole area of almost 170,000 m^2.

Moreover, in most urban squares, there is a lack of food services and newspaper booths or often such services are placed underground. On the ground level, vendor activities are discouraged and existing open markets have been cancelled or moved to indoor or to an underground level. Such arrangements are not for the reason that people do not need such services, but are based on an ideological understanding of what constitutes the 'high quality' of urban square life. Vendors pestering or setting up stalls wilfully in an open market are regarded as 'backward' and problematic from the perspective of environmental management and sanitation. Therefore, in order to maintain the order of the square and an ordered atmosphere, such activities have been relocated in indoor space, underground levels or simply banned outright.

That the focus on urban landscape enhancement has been largely indifferent to considerations of public use is shown clearly in most of the case studies. The preference for image enhancement is not only apparent in the approach to and choice of design elements, it also appears in the provision of activities and facilities. The prevalence of this phenomenon in contemporary urban squares has made it only more difficult to cater them to meet the needs of every day urban life. Further analysis of the results of this solution are discussed at a deeper level in later section,

5.1.8 Summary

This part analyses the general issues of modern urban squares which includes: location in city centre, largeness of scale, the enhancement of urban landscape, use for leisure, the contradiction between image enhancement and public use, the typical model and an isolated site. These issues, referring to design intentions, methods and

elements are common to the cases of different types, thematic sites, assembly and dispersal hubs or leisure spaces. They point to the strengths and weaknesses of public open space development which need to be discussed in more detail in relation to the appropriateness and significance of western design elements.

5.2 The strengths of urban square designs

The strengths of urban square designs generally are represented by the benefits which are brought by the introduction of the urban square - the spatial form. The benefits ought to be significant in referring to further development in public open space construction in terms of serving the public good. The examination of strengths is based on the analysis of common issues and pertains largely to the change in the specific components of urban public open spaces and their influence on urban pattern and more general design issues.

5.2.1 New urban public open spaces

Before the arrival of the 'urban square craze', public open spaces were dominated by parks and urban green-fields and both components mainly employed the ideals of traditional landscape architecture.

The book of Beijing New Landscape Architecture Design (Liu 1996) describes projects including public parks, neighbourhood parks and Greenfield sites, but for urban squares, the only reference is to the greenery of Tiananmen Square. The book 'Selected Works of Shanghai Landscape Architecture Design', published in 1999,

only includes one urban square, The People's Square of Shanghai, but includes nineteen parks and green field projects. The series of books of 'Landscape Architecture Design of Excellence in China' published since 1990, until the fifth volume was published in 2000, began to include urban squares within its content. And in the same year (2000), The Chinese Association of Urban Planning organised and published a series of books comprising a special review of urban design and urban construction. These books are dominated by pictures rather than professional discussion. 'Urban Square' is one of them based on a selection of 19 projects throughout China and most of them built in the second half of the 1990s.

Although there has been some evolution, such as the creation of prevailing themes and more detailed scenery, in Beijing, for examples, the Willow Park characterised by willow trees, the Purple Bamboo Park characterised by bamboo and the Taoranting Park characterised by Chinese Pavilions (Liu 1996: 6), the concepts and forms of Chinese traditional park – making dominated park design. In terms of spatial organisation, the dominance of Chinese tradition is apparent in the emphasis on separation, contrast, echo and even the use of a single lake containing three islands. That same dominance of Chinese tradition in terms of specific design elements is apparent in the ubiquitousness of hills, woods, water, trails and buildings (Liu 1996: 8). Contrasted with those classical parks and gardens built by private or royal landscape architects, in the new parks, the range of materials is enlarged, such as pavilions in the ancient style but built from concrete not wood and although, the compositions have evolved, the general style is similar, even the form.

The use of walls for site enclosure and separation from the urban environment is a good example of this. As everyone knows, traditional Chinese gardens were originally private residential places and classical parks were royal resorts. The prominence of walls in those sites was for security and privacy, not decoration, although the wall was also used as a decorated design element. However, the use of the wall as a design element and an inseparable part of the park has been carried on in modern public park design and construction especially during the 1980s and the early 1990s. For instance, in Qingdao, the Small Fish Park built in 1987 and Huangdao Park built in 1990

Figure 5.04 The gate and wall of Huangdao Park, Qingdao, This park was built in the early year of 1990s. The gateway is the main entrance to enter this hill park.

(figure 5.04), are both hill-site parks, both with walls in the traditional style (cloud-wall). Ironically, these two hill areas used to be free access but since they became public parks, an entrance charge has been introduced and the number of access trails has been greatly reduced. This serves to reinforce the separation of leisure from daily life.

The traditional landscape architecture ideals, originally applied in the context of privately-owned land, came to be applied in the context of public open space.

However, many of the forms in which these ideals were to be expressed remained the same despite the shift of context from private to public space.

In contradistinction to traditional parks, urban squares have tended to be based on geometric rather than organic patterns, and access to them has tended to be free rather than regulated. This has meant that urban squares have added a new dimension to public open spaces in China complementary to that dimension provided by traditional parks.

5.2.2 The change of urban pattern and urban life

The urban pattern was once divided rigidly according to function and urban life was limited to spaces between walls. Residential neighbourhoods were enclosed by wall, as were office areas. Although some new public buildings such as museums and art galleries are still enclosed by walls (Zhang & Yang 2002: 207), the arrival of urban squares has opened up the dense and enclosed fabric of Chinese cities and has changed the urban pattern, making it more lively and convenient for people's leisure life.

In most Chinese traditional capital cities, the urban pattern was a grid dominated by walls (figure 5.05). Walls used to enclosed office areas, factories, institutes, residential area, parks and gardens even in modern times. Walking on the streets, one saw only various walls, the space was without variation of width and narrowness, thus dramatically spatial changes. Only in the streets are the public free to assemble; people could walk through from one to another without having to go through gates.

Different aspects of urban life were separated by walls to conditions of independence: step into the gate of a park, where one could spend one's leisure time; step out of the gate of the park and join in the passing flow in the street and then step into another gate for working or home life.

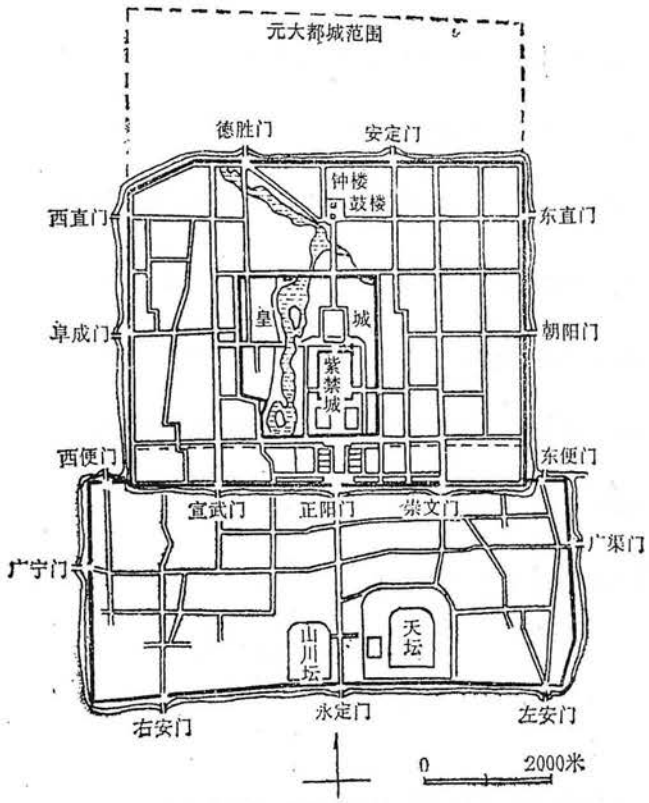


Figure 5.05a The picture shows the urban plan of Beijing in Ming Dynasty (1368-1644) of a grid pattern. (Source: The history of City Development in China, 101)

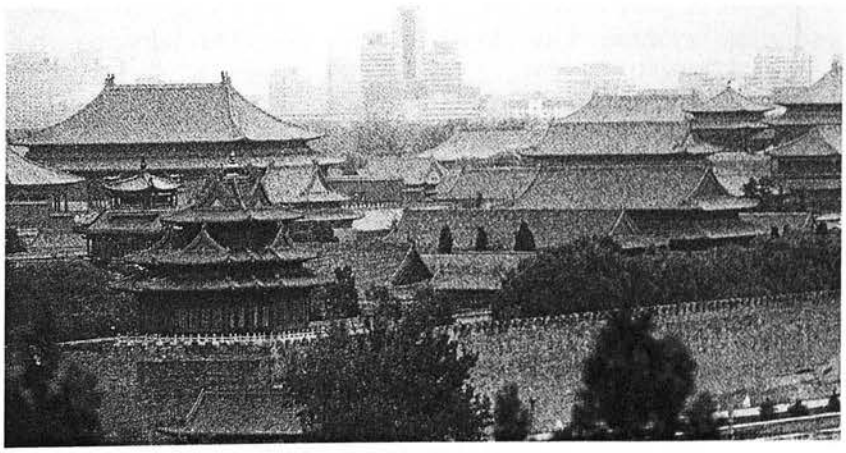


Figure 5.05b Forbidden City Walls used to enclose yards for the royal family from ordinary people. (Source: Urban Design – Form and Embellishment 59)

Dalian in the early 1990s became the city that took the lead in abandoning its walls to improve its urban landscape. Taking inspiration from the west, walls were destroyed

or replaced by railings in the city centre. Thus some spaces once separated on either side of a wall were united and some spaces merged to become public spaces, green strips, street nodes or plazas. At the same time, Dalian renovated original squares such as Zhongshan Square (figure 3.12) and the People's Square (figure 3.04). These measures made Dalian take on an entirely new look. According to Mr Zhang's (one of the officers of the local authority who was in charge of urban renewal projects when the author visited Dalian in the spring of 1997) introduction, people from different cities came here to experience the new city environment. In all the case studies, the appearances of new public open spaces brought conspicuous changes, especially in central areas where densely sited buildings and structures were demolished to make way for open and spacious urban squares. And since then, social life has broken the limitations of walls and become mixed up with urban squares. Leisure and recreational activities are no longer limited to parks and gardens, but are mixed together in new public open spaces.

The analysis of the case studies outlines a picture of people beginning to spend their leisure time in urban squares, enjoying the sunshine and outdoor activities, communicating with each other and participating in events. Many urban squares have become the places where citizens come spontaneously for celebration of public events. Previously they used to be organised to attend rallies and the squares mostly were the places for rallies but not for spontaneous events.

These urban squares jump out of the conventional frame of wall enclosure and have become a part of the urban landscape epitomising the changes of urban life.

5.2.3 New landmark and public art

Carmona et al. (2003: 262) claim that accentuating landmarks and placing art in public spaces are methods of improving the high street environment. Attendant upon the development of urban squares, a number of sculptures have become new street features. They are visible from most parts of the site and help residents orient themselves in outdoor spaces and aim to enhance the artistic meaning and quality of the area. Some of them become new symbols of their cities, beautifying the urban landscape and enriching local culture. Water features soften hard surfaces and enliven the surroundings. Although there are issues here, such as maintenance costs, they are accepted and welcomed by citizens, as can be seen in the case studies.

5.2.4 Quality and quantity of seating areas

Seating arrangements are varied in form and orientation. They comprise enlarged kerbs, the edges of flowerbeds, bollards and benches in various shapes and of various materials for comfort and decoration. They invite people to stay and provide various choices for people in individuals or in groups. Luying Square in Chongqing, Beibuwan Square in Beihai and May 4th Square in Qingdao make significant contributions in catering for daily use in this way.

5.3 The weaknesses

Weaknesses are those things which are not helpful in terms of aesthetics and social utility and which therefore, should be avoided in urban square design and

construction. The examination of weaknesses is based on the general issues of urban squares analysed in section 5.1.

5.3.1 The disregarding of three-dimensional space and the deviation from human scale

As Chapter 2 explains, three-dimensional space is the basic characteristic of urban squares, it is materialised by three major space-defining elements: the surrounding structures, the floor and the imaginary sphere of the sky overhead. This indicates the close relationship between the site and its surroundings. The enclosure of surrounding buildings and their possible decorative role has been reduced, especially in those urban squares built at a large scale. However, urban squares in China are isolated islands in an urban pattern, surrounded by traffic roads and consequently have very little connection with surroundings. It follows that, the greater the area of the square, the lesser the effect of surrounding buildings in enclosing and defining the squares. They are thus two-dimensional rather than three-dimensional spaces.

One may say, according to the law of space enclosure (Chmielewski 1996) the length of the floor is ought to be four times of the height of structure to provide spatial enclosure. In an urban square of 100 metres in length, the surrounding buildings should be 25 metres high, or in an urban square of 200 metres in length, the surrounding buildings should be 50 metres high and so on. Buildings over 10-stories height are common in modern cities, so there is a possibility for creating enclosed, three-dimensional spaces. However, urban squares are places designed to serve

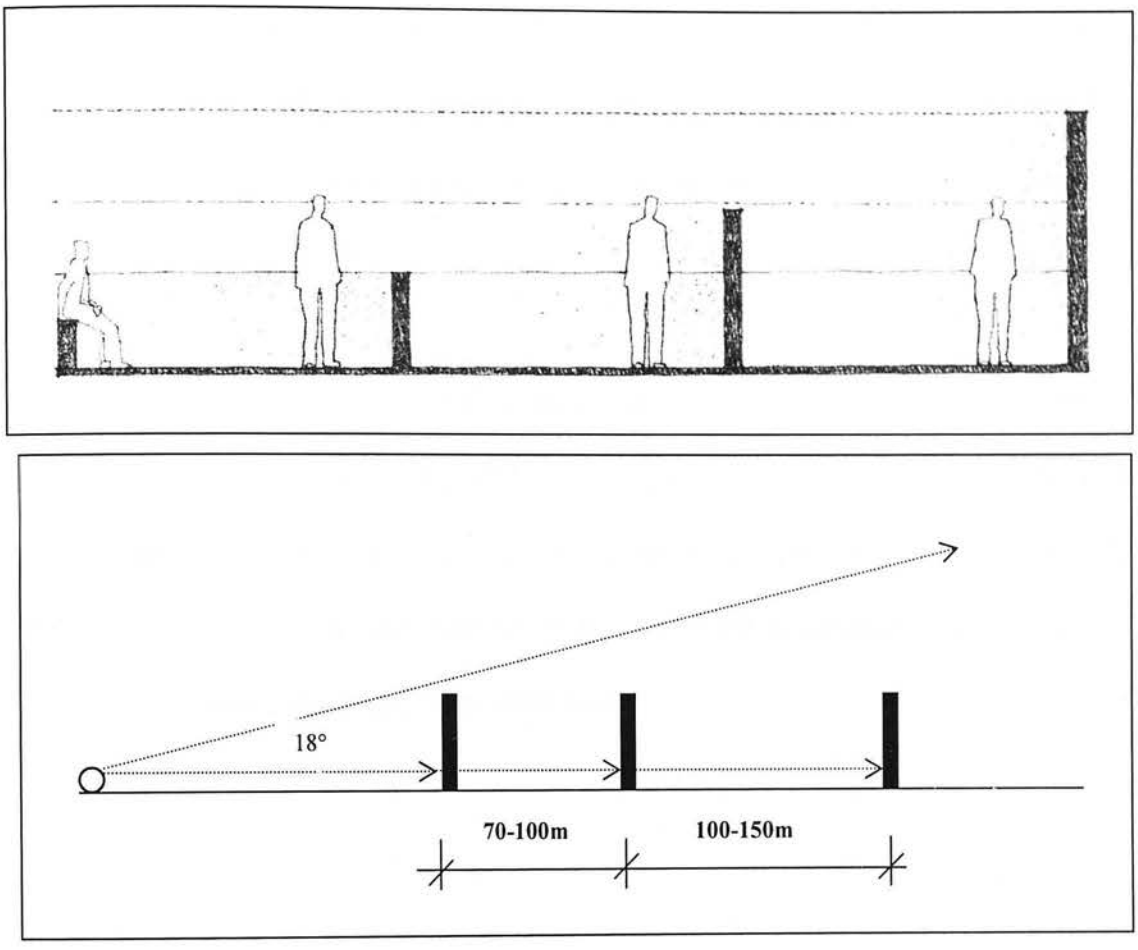


Figure 5.06 Space enclosure and human scale

Top sketch: "When two-feet high, a plane visually defines the edge of a spatial field but provides little or no sense of enclosure. When waist-high, it begins to provide a sense of enclosure while allowing for visual continuity with the adjoining space. When it approaches our eye level in height, it begins to separate one space from another. Above our height, a plane interrupts the visual and spatial continuity between two fields and provides a strong sense of enclosure".
(Source: Cling 1996: 131)

Bottom sketch: A person usually employs an angle of 18° vertically to look around an urban square "in order to fuse various architectural units with their surroundings into a total impression" (Zucker 1966: 7). "70 to 100m is the maximum distance" for him to being able to see events (Gehl 1987: 67), within this distance, a surrounding building with 30m-height can "interrupt the visual and spatial continuity and provides a strong sense of enclosure". But, if the distance extends to 150m, the building with the same height cannot interrupt the visual and spatial continuity. The sense of enclosure has been reduced. Even if the surrounding buildings were the height of 50m or 100m, it is not possible for human beings to see events clearly at distances of over 100m.

people's needs, therefore, whether an urban square is three-dimensional or not, is not primarily a matter of simple prescriptive ratios. The direct perception of space by people is the primary issue. It may be that, beyond a certain distance, no height of building will generate enclosure.

"Our body height and eye level is the critical factor that affects the ability of the plane to visually describe space" (Cling 1996: 131). Figure 5.06 illustrates the interaction of the two elements of spatial enclosure and human scale. The data of the width and length of cases listed in table 5.01 show that many urban squares disregard three-dimensional space and deviate from human scale.

5.3.2 The lack of spatial subdivision

The majority of the urban squares introduced in the case studies are large in sizes. This does not mean there is no chance to be a human scale space. However, those large urban squares do not provide sub-spaces in modest size to approach human scale in a spatial sense. In Dragon Square in Shenzhen, for example, only the sunken area provides a sub-space but it is insufficient to alleviate the sad fact that there is almost no spatial division to improve the overall urban square as a human scale space (figure 5.07). The model of 'a line across three rings' and the analysis of cases in chapter 3 reveals that most urban squares have the same problem as Dragon Square in that they are a plane in surface, and lack spatial subdivision, and though there are holes (sunken areas) in the middle, these have little effect on the spatial division of the whole site.

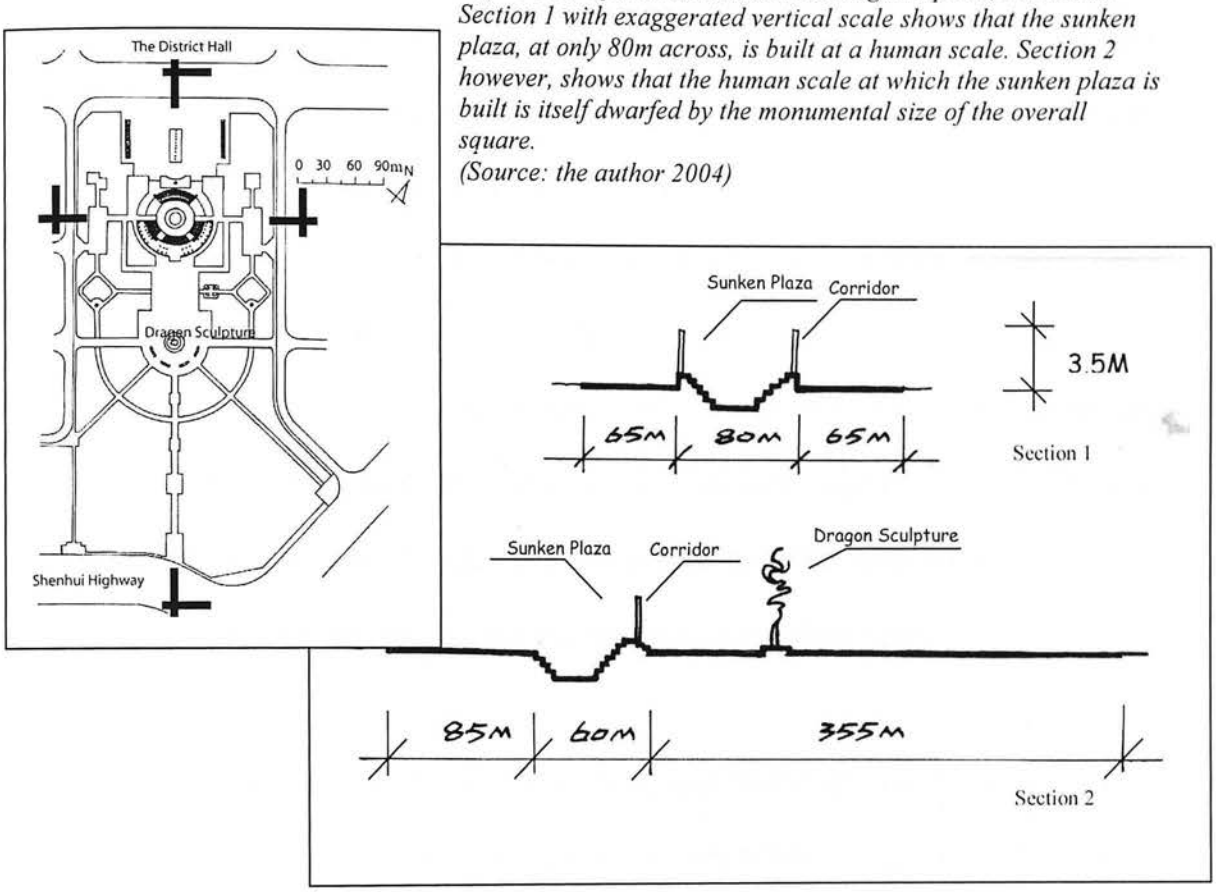


Figure 5.07 Spatial subdivision in Dragon Square, Shenzhen: Section 1 with exaggerated vertical scale shows that the sunken plaza, at only 80m across, is built at a human scale. Section 2 however, shows that the human scale at which the sunken plaza is built is itself dwarfed by the monumental size of the overall square.
(Source: the author 2004)

5.3.3 The stereotyped form

Although the cases analysed in chapter 3 have different appearances, such as the sculptures in different size, materials and colours, each of them closely follow the model 'a line across three rings'.

The site typically lies in an urban traffic net with little connection to its surroundings. This means that walking to the square to have a rest or attend activities, involves crossing busy roads. Use of the square must therefore be the result of a deliberate rather than a spontaneous decision. The square is 'an isolated island' in an urban pattern. The word 'isolated' here indicates that the relations of urban squares to other public spaces are severed.

The lawn areas often limit entry and exit into certain parts of the square and the hard surface area becomes the main area for people's activities. The sunken area and the hard surface with its sculptures or water features barely relate to the surrounding city or landform. In the appearance, scale, distribution and symbolic meaning urban squares only express the ideas of the designers or of major political events. These themes are prioritised over using features to evolve and connect with the surrounding landscape or urban context. This indicates that an urban square is conceived as an independent unit of spatial form. Even the closest buildings only serve to define the borders of the urban square, they are not the parts of the urban square.

Without the attention to surrounding buildings and related factors, the site area alone carries the responsibility of being distinctive. Therefore, sculptures and fountains become essential elements for creating something special. Although identity has been accentuated by designers, the creation of it is limited to the application of design elements but not local context in terms of culture, geography and history. Heckscher (1977: 150) comments that Jackson Square in New Orleans, "does not exist by itself, but by the things of which it is a part", but most urban squares referred to in the case studies exist by themselves. Set up on such a foundation, the creation of distinctiveness is impeded by the loss of potential variation, for example the use of only one or two primary colours (red and yellow) at the exclusion of the third (blue) means that there can be fewer colours to the square design. The separation from surroundings drives away any opportunities for urban squares to become integrated in position and character.

The 'a line across three rings' model only leaves the central area for people to relax in since the edges are protected by 'keep off the lawns'. Such an arrangement runs counter to normal behaviour in public spaces. Gehl (1987) summarises popularity of edges for relaxation in Dutch recreational areas: " the edges of the forest, beaches, groups of trees, or clearings were the preferred zones for staying, while the open plains or beaches were not used until the edge zones were fully occupied" (de Jonge quoted in Gehl 1987: 151). "In city spaces the preferred stopping zones also are found along the borders of the spaces or at the edges of spaces within the space" (Gehl 1987: 151). The analysis of Xidan Cultural Square introduced in Chapter 3 contains a similar observation. People come to public space mainly for relaxation or for experiencing community life irrespective of public performances or other attractions. "If the edge fails, then the space never becomes lively" (Alexander quoted in Gehl 1987: 152).

The model shows clear orderliness. However, "order refers not simply to geometric regularity, but rather to a condition in which each part of a whole is properly disposed with reference to other parts and to its purpose so as to produce a harmonious arrangement. "Order without diversity can result in monotony or boredom" Ching (1996: 320). The issues generated by this model not only indicate that modern urban squares in China may become stereotyped and also monotonous.

The 'a line across three rings' model has not appeared in isolation. To a certain extent, it is the consequence of pursuing large-scale development irrespective of human scale. This will be discussed in a later section.

5.3.4 The use of elements

Essentially, the application of western design elements occurs at a monumental scale, such as huge sculptures, large fountains and endless untouchable lawns; as a result, there is lack of intimacy and liveliness. Although there have been some more human touches, such as water jets that can be played with, such touches are not widespread. Additionally, although these design elements have been used in an attempt to create distinctiveness, the fact that they are not integrated into their surroundings – as analysed in the previous section – means that the net result is often weak.

As there are disadvantages to large scale, stereotyped forms, how could design elements be best applied in the creation of high quality? The design elements do not only exist as manifest symbols of change, but also as apparatus of spatial organisation and ultimately, for enlivening the atmosphere and satisfying the needs of people.

5.3.5 Evergreen lawns

Lawns may bring physical and psychological benefits to urban life due to their soft texture, green colour and capacity for reoxygenising the air. In spite of these advantages of lawns, however, designers and developers have six other reasons for planting evergreen lawns.

- First of all, lawns are historically a strong scenic element of modern urban landscapes in many developed countries. Lawns have thus become a kind of symbol of organisation and elegance in the natural and urban landscape. For

this reason the use of lawns is important in developing modern urban landscapes and urban life in Chinese cities.

- Second, the large and completely open contemporary urban squares cannot be attractive with only hard surfaces and hard structures. Lawns furnish the open spaces of an urban square with soft surfaces – which invite more relaxed use.

- Third, lawns could precisely reflect the existing local landform. This fact makes lawns an ideal means for keeping the visual line unobstructed. Precisely for this reason, the planting of trees has largely been rejected in urban square design.

- Fourth, 'all soil should be hidden' is a basic principle of environmental design in each Chinese city. One of the basic ecological facts of lawns is that they cover the earth, preventing the raising of dust. Instead of reds, browns, and greys, lawns leave green colour in the surface of the earth revitalising the atmosphere.

- Fifth, for urban construction processes characterised primarily by speed, lawns are a suitable material. The period required for a mature lawn (using pre-grown turf) is normally a matter of days, whereas the time necessary for nursery trees to become mature may be up to 12 years. The time limit of many development projects is typically one-year. Lawns can cover the site area and turn green rapidly in the shortest time and provide a synchronised final effect

with those hard structures – paving, sculptures and fountains, bringing surprise to local citizens.

- Sixth, the construction cost per square metre of lawn is cheap compared with other materials, such as trees and shrubs and hard paving material, especially for those urban squares that lie above underground structures and need soil to support vegetation. Due to financial limitations developers prefer low costs and thus materials which can be applied quickly.

To sum up, the use of lawns seems to have benefits in both subjective and objective terms. The use of lawns is not as simple as mere image enhancement. The striking contrast between the past and the present of the site, these have been reduced by three comprehensive consequences.

The first is that evergreen lawns could be appreciated but not used. For maintenance reasons, people are prohibited to walk through or stay on lawns. The production of lawns mainly depends on exotic grass seeds, which are unable to bear being trodden on. Frequently, in Chinese cities, they are protected by implementing the 'keep off' rule. This makes the space only partially public, restricting the extent of freedom; people have to walk the long way around along hard surface paths to come in or go out. Although there have been different solutions to this problem, such as laying hard paving material on desire lines to provide convenient routes, or inlaying grass between paving bricks to blur the border between paving and lawns, these solutions do not really address the restrictive nature of evergreen lawns.

The second consequence of inappropriate use of lawn is that lawns are featureless without people and various activities; they are green and quiet, but lonely and void. As a consequence they cannot display vivid urban life and therefore lack the status of truly public spaces, which are places for serving public life.

The third consequence of inappropriate use of lawn is that lawns have a high maintenance cost but low ecological benefits. As exotic seeds, which are most often used in producing lawns, need time to adapt to the new environment and face competition from the indigenous species in growing, these lawns degenerate easily and therefore need constant conservation, cutting, watering and prevention of grass disease and pests (Chen 1999: 72). Additionally, because the climate is very different throughout the country and rainfall in different regions varies in amount throughout the four seasons, irrigation and drainage is a major source of maintenance costs. The maintenance cost ranges from fifty pence (Wang & Song 2000: 11) to 2 pounds per square metres per year (Jin 2000:12) depending on the region.

Moreover, according to the comprehensive measure of ecological benefit (Chen 1997: 6) (release of oxygen, absorption of carbon dioxide, transpiration and absorption of heat, absorption dust, reduction and elimination of bacteria and reduction of pollution), plant communities are 4-5 times more effective than lawns with only one third of the maintenance cost. It is thus clear that the ecological benefit of lawns is very small compared to its maintenance cost. The ratio of urban green field per person in China is much lower than many western countries, for example the average ratio of park space per person in London is 30.4 square metres, the average ratio of park space

per person in Paris is 12.2 square metres (Li 1999: 24) but the ratio of green field per person for the year 2000 in Chinese cities was intended to increase to only 6-10 square metres (Yang 1995: 4). The reader will note the difference between a ratio of total urban greenery, and a ratio of mere park greenery. Park greenery is just an aspect of total urban greenery. Therefore, to improve the existing level of greenery in Chinese cities, the development of plant communities should be the main approach, as purely grass areas are not robust enough to adjust to the climate and maintain an ecological balance.

This analysis illustrates the advantages and disadvantages of lawn areas in the urban landscape. The combined ecological, social and aesthetic result of the use of lawns is not conductive to a high quality of urban landscape and urban life. This raises a question mark over the adequacy of the use application of lawns.

5.3.6 Serving daily life

The designs of modern urban squares pay a good deal of attention to symbolism and monumental expression, but comparably less attention to how they may be used in daily life. The fact that lawns have been protected from people has been mentioned several times already. On the ground level, serving facilities, such as restaurants, snack booths, tea bars or entertainment facilities can rarely be found; these are mostly underneath the urban squares in order to avoid spoiling the geometric patterns, magnificent fountains, colourful flowerbeds and so on. Programmes of entertainment, as arranged in some urban squares, normally take place at weekends or on national holidays. Open-air markets are considered to be incompatible with the elegant

appreciation of art and have been prohibited, even though some squares have a market background history.

Many squares can only be partly used in some areas and seasons of the year. There is a lack of shady trees to protect people from the burning sunshine and a lack of shelter or corners to avoid the strong wind. Fountains as grand and magnificent water features have to lie inoperative for much of the time to save cost and to prevent freezing in the winter. If fountains were designed in a more modest size with constantly running water, it would be possible for them to vitalise the atmosphere and create greater intimacy. Opportunities to visit urban squares should not be restricted to certain favourable times. Their beauty and charm should be constant, not intermittent and occasional.

The general analysis of observation on urban squares and the use of design elements covers many issues, such as the grandeur of paving expressive patterns, the monumental sculptures, the temporarily used fountains and the lawns. As a whole these issues, are all concerned with the design of urban squares at large scales. Therefore, the essential problem in modern urban squares in China is not the use of lawns, the fountains or sculptures, it is the scale which is far from human and distorts the role urban squares should play and could play in urban landscape and urban life.

5.4 The problems

The analysis of weaknesses of urban square design indicates that all the issues relates to monumental scale. Exploring the consequences of large scale design is useful in

order to convey clearly the mature of the problems, this creates and to suggest ways of improving the quality of urban squares.

5.4.1 Large scale makes spatial enclosure and containment impossible.

Zucker (1966: 7) comments: " Whereas over wide-open squares, such as the Place de la Concorde in Paris, the visual distance of the sky is only vaguely perceived". The length and width are decisive to the distances between surrounding buildings. Surrounding buildings have been apart from each other in many urban squares in China as section 5.3.1 analyses. Therefore, fundamentally, large scale makes spatial enclosure and containment difficult.

5.4.2 Large scale reduces the influence of surrounding factors making an urban square an isolated site.

If a large site occupies a whole block or extends to another in the urban pattern, its immediate surroundings will unavoidably be traffic roads, creating further separation from other surroundings elements. There is no building connected with the site directly, there is no transitional space or border between indoor and outdoor and there are no activities connecting the indoors with the outdoors. The following picture Webb (1990:13) describes could not take place in such spaces. "Commuters and shoppers crisscross the square or hug the arcades in foul weather and the blaze of noon ... the tables fill up for lunch and empty as people return to work or drift off for a siesta. In those fortunate plazas from which cars have been banished, voices dominate..."

5.4.3 Large scale makes the creation of local identity difficult.

As there is no condition to limit it or no elements of surroundings to be borrowed, the identity of the site has to be created relying on its own design elements and its own limited space. The design elements that could be applied have already lost advantages to vary their shape and character. The permutation in mathematics illustrates a same truth. The mutual combination between three different elements A, B and C could create four new sets AB, AC, BC and ABC, but if cut one only combine between A and B, then there is only AB as the new set.

However, there should be something to attract people to cross the road and to occupy the huge space. To this end, fountains, sculptures, lawns and pavements have become the dominant shapers of the urban squares, offering water features big or small, high or low, hard surfaces broken up by sunken areas and raised platforms and obvious changes in colour by lawns and pavement. These designs are all intended to enrich the character of the urban square, but without the support and combination of a surrounding context, the veins to connect with other urban elements have been cut. The changes brought by fountains, sculptures, lawns and pavements only refer to themselves. Such urban squares of 'a line across three rings' model are likely to lack identity from the very beginning.

5.4.4 Large scale risks destroying the memories and meanings of the city.

Table 5.02 shows that many urban squares have replaced old and dense houses and other land uses such as markets and playgrounds, giving the locations completely new characters. Lynch (1960: 1) cautions that, "every citizen has had long associations with some part of his city, and his image is soaked in memories and meanings". Liang-yong Wu sharply criticises re-construction in large scale (Wu 1998), stating that superficial achievements actually conceal the real high cost which is the obliteration of the memories of the city.

Existing urban places are alive because they have survived over the process of historical selection. These places provide a record of history and the accumulation of a culture in which the local identity is rooted. Some new urban squares bespeak the investment of considerable energy in designing sculptures and characteristics to symbolise a civic identity, but in most cases the roots of these symbolic meanings have been discarded.

5.4.5 Hard surfaces at a large scale

Large areas covered by hard surfaces might be "immovable, uncomfortable, and oriented inward, away from any activity" (Carr *et al.* 1992: 89). Table 5.01 shows the total of hard surfaces in each urban square. Cultural Square in Changchun has 66,000 m^2 have paving and Quancheng Square has 52,000 m^2 in total; almost half of the cases have hard paving more than 20,000 m^2, St. Peter's Square – the grandest square in the western world, is just 30,000 m^2 total in area, thus it can be seen how large the hard surfaces many Chinese urban squares are.

5.4.6 The model of 'a line across three rings' is the consequence of pursuing large scale development

To reduce the uncomfortable feeling caused by large hard surfaces, lawns are used to soften them, large structures are employed to reduce spatial void and the arrangement of sunken areas are used to vary their level and break plane in surface. In the final analysis, these elements are used to solve other consequences brought out by large scale, the appearance of the model of 'a line across three rings' is reasonable. Therefore, the model is the consequence of pursuing large scale.

Based on case studies, the analysis reveals that the essential problem in urban square design is large, or rather non-human scale. The recognition of this essential problem is necessary for exploring the solutions to improve the quality of urban squares and evaluating contemporary urban square development.

5.4.7 Summary

From the perspective of discarding various outward appearances and selecting its relevance in the inner link between these general findings, the analysis of the case studies identifies strengths and weaknesses in urban square designs and the causality between the weakness of the selection and application of design elements and the general model, the change of function and the expensive scale. This causality manifests the essential problem that affects modern urban square development. The findings of the analysis point to the issues should be addressed in the further development of urban squares.

5.5 The reasons behind the essential problem

The essential problem of the dominance of large scale dominates urban square designs has already been explored. The analysis of the reasons behind the problem is based on case study analysis and the views of designers and officials who have been interviewed. These interviews were carried out for all the case studies between 2000 and 2004. The analysis is decisive in characterising modern urban square development.

5.5.1 The reasons in general

Greenery

In introducing their case studies, the designers of Shanghai People's Square, Xidan Cultural Square, Xian Ancient Towers Square, Changchun Cultural Square and Jinan Spring Square and so on, mentioned the contributions that their urban squares have made in increasing the greenery ratio. The quantity of the lawns of these squares is added into the calculations of urban greenery.

The greenery ratio is an important criterion in the annual assessment of urban construction and, to a certain extent; it can be used to show evidence of the attention paid to the ecological appeal of an urban area. The Ministry of Construction produced 'The Standard of Garden City' in 1996 which stipulates that in urban areas the greenery ratio of land use should be a minimum of 30 percent. The higher figures of greenery are more easily accepted than the increased amount of sculptures or

fountains in terms of social benefit, cost and aesthetics as the greenery ratio defines a city as a garden city (interview with Mr Jin-guang Li, September 2001). Therefore, there is a universal requirement for local authorities to ensure the greenery ratio in each outdoor space and that greenery is recognised as an important aspect of public space design.

Quick and obvious change

The eagerness for quick success and instant benefit are problems mentioned by several Chinese scholars (Yu & Ji 2000; Tu 1998 & Wu 1998). Conspicuous change speaks loudly of the development of the city, or in other words it speaks of the energy and radicalism of local authorities. It also attracts more commercial activity and brings more commercial value to the surrounding areas and, hence, stimulates local economic development. For example, attendant upon an environment project in the new district of Qingdao which included May 4th Square and another 10 parks, squares and nodes along the 12.8 kilometre-long Donghai Road in 1997, property values along Donghai Road increased by 100-300 percent (interview with Mr Jin-guang Li, September 2001). Such commercial benefit demonstrates that the large scale is especially suitable to a contemporary society characterised by an emphasis on rapid economic development.

To meet the preferences of people

Officials and designers believe that citizens prefer public spaces at a large scale. The authorities then try to meet such preference by developing public space at a large scale in order to show their benevolence toward the people and to improve the quality of life (interview with government officials, Mr Zhang, 1997 in Dalian; Mr Li, 2001

in Qingdao and Mr Zhang, 2003 in Jinan, and with designers Mr Wang, 2003 in Shenzhen).

Densely populated cities

There is a common viewpoint shared among designers and officials that Chinese cities are densely populated, and that new public spaces are very small and unable to accommodate many people. Therefore, in relation to this Chinese context, building urban squares at a large scale is intended to satisfy the needs of more and more people to use public open spaces.

The reasons listed above indicate that the pursuit of large scale has been at the basis of urban design. They may sound plausible enough as the desire for urban development is to improve people's lives and the condition in China. But it is not so simple. The view that large scale public space appeals to people's wishes seems to be supported by citizens' opinion. For example, in Qingdao, complaints that May 4th Square is too small and should be more grand and magnificent, merely repeats the announcement that citizens prefer large urban squares (the author has this experience during the time when she was involved in the construction of this project and later she engaged in informal conversation in the process of surveys and interviews in Qingdao). Yet May 4th Square, of 10 hectares, could not be said to be small in terms of design principles and functional role. Why did citizens have such a viewpoint is the question raised from their complaint.

In the understanding of the author there was a perspective revealed in informal conversations between the author and citizens in Qingdao which offers a deeper

understanding about citizens' complaints. The citizens complained that May 4th Square is too small yet they also complained that more and more spaces have been allocated for privately owned use so that the spaces for the public have become less and less. The dissatisfaction is understandable as the appearance of more private and luxury residential areas and business centres makes people feel the ownership of their city is disappearing from their normal lives. For example, the beach in Qingdao used to be free to anyone, but this has been broken up since, with a part of the beach reserved for the use of hotel guests since 1996. This means that the complaint of citizens does not proceed from a certain case, it is a kind of rejection of the enlargement of private space and the relative reduction of public space in general. Therefore, judging from this, there is a misunderstanding between the authorities and citizens and hence, the validity of the reasons held by many authorities for building large scale urban squares should be doubted.

Moreover, the analysis of basic attributes of urban squares in Chapter 2 and the comparison of parks and urban squares especially in section 2.2.6, shows the role of greenery in urban square designs and the differences from park designs. Greenery is a crucial component of a park as it is the 'lung' of a city but an urban square is a 'living room' of a city and greenery is just one of the design elements important in improving the quality of the urban square. This indicates that over-emphasising greenery is inappropriate in urban square designs. With regard to the reasons for large scale, quick and obvious change, there is a lack of either theoretical or empirical support to suggest that this is suitable for people living in densely populated areas. In fact, the outcome does not meet the intention as the analysis shows in previous sections and

the reasons analysed in this section are unable to explain the causes of the essential problem indicating that there must be more structural reasons behind this failure.

5.5.2 The lack of theoretical research

The craze for urban squares in Chinese cities arose in the early 1990s, when the concept of urban design was just beginning to be introduced to the academic circles of urban development. At this time the emphases of urban environmental research lingered on ecological greenery, parks and Chinese traditional garden art.

The Chinese Treatises Collection of Urban Design, Volume I, collects the papers published in the ten years up to and including 1998 about urban design and project analysis from the nationwide professional journals in urban construction, such as 'Urban Planning', 'Architecture', 'Foreign Planning' and 'Time Architecture'. Table 5.03 shows the papers about urban design published from 1988 to 1998. Among them, there are only 10 articles about urban squares and all of them concentrated in 1998.

Table 5.03 N umber of Chinese articles of urban design and urban square between 1988 to 1998

Year	Urban design		Urban square	
	Theory	Practice	Theory	Practice
1988	1	1		
1989	2	1		
1990	6			
1991	2			
1992	3	4		
1993	1	3		
1994	7	2		
1995	6	9		
1996	5	8		1
1997	1	7		
1998	16	7	3	6

Table 5.04 enumerates translated works which have been quoted in the papers involved in urban square and urban design research selected in Volume I of the Treatises Collection of Urban Design. Although there is no lack of classical works, the quantity of translated books is very small compared with the literature contributions in this research area.

Table 5.04 Influential foreign books on public open space in Chinese version

Name of book	Author	Year of translation	Translator
Town Planning	F G	1983	Cheng L.R.
Bush Design Element of Landscape Architecture	Norman K.		
Life between Buildings	Gehl J.	1992	He R.K.
Urban Design	E. D. Bacon	1989	Huang F.X. & Zhu Q.
The History of Urban Development	Mumford L.	1989	Cao L.K. & Cao D.K.
The Image of City	Lynch K.	1990	Xiang B.R.
Japanese Outdoor Space Design		1985	
Japanese Environmental Design of Outside Buildings		1996	Liu Y.D.
Japanese Environmental Psychology		1986	Zhou C. & Li M.M.
Public behaviour and Urban Park Design	A. K. Latliki	1990	Wang Q.S. & Gao F.

Table 5.05 summarises the subjects covered and the corresponding number of papers published in the Journal of Landscape Architecture, China since 1985 (the year of its first publication) to 2000. It shows that only 11 papers referred to urban squares and although one of them started to be published in 1994, most of them were published in the last two years of the 1990s. The majority of papers about historical and modern landscape architecture and environment design in foreign countries only introduce the general subject and, although they have plenty of pictures to illustrate, they lack systematic analysis and practical explanation. Such introductions, to a certain extent, provide a superficial impression of a subject, rather than a rational and comprehensive analysis. Such superficial papers easily lead to one-sided understandings or misunderstandings.

Table 5.05 Comparative distribution of subjects in Chinese Landscape Architecture Journals

Year	*Design element*				Public space		Research and Introduction			
	Plant	Lawn	Fountain	Sculpture	Park	Plaza	Chinese historical	Chinese modern	Foreign historical	Foreign modern
1985	17	4	1		4		12	4		5
1986	16	1			4		8	3		4
1987	8	2			3		9	4	2	2
1988	15	1			5		8	5		4
1989	8				5		11	3	5	2
1990	25	1			6		7	3	1	3
1991	5				4		12	3	1	4
1992	3				4		8	7		
1993	8	2			4		8	3		
1994	5				9	1	13	3		1
1995	8				4		8	9	1	1
1996	3	1	2		11	1	9	6		1
1997	8	3		1	10	1	4	4	2	2
1998	6	4	1		6		8	4		
1999	11	4	1		5	3	9	9	1	7
2000	10	7			7	5	16	10	1	9

The analysis above reveals that the theoretical works are dissynchronous to the practice of urban public space and that the research started only after the problems had appeared. With conspicuous blindness and under the stimulation of the willingness to pursue instant benefits and rapid change, the construction of urban squares inevitably fell into the trap of 'bigger is better' reasoning.

5.5.3 Summary

Design practice without a theoretical base risks introducing changes that do not meet the public's requirements. Unless such a basis exists, the goals of image enhancement and the improvements of urban life are unlikely to be reached.

5.6 Conclusion

This chapter presents the general findings of case studies, the strengths and weaknesses and the problems of modern urban public open space design and construction. It explores the general and specific reasons causing the problems and also touches on the perceptions of citizens to provide a more comprehensive perspective.

The pattern of 'a line across three rings' exposes the model modern urban squares are following. The figures of the comparison of the sizes reveal the prevalence of the large scale in urban square construction and the subsequent analysis demonstrated that the pursuit of large scale design is the essential problem in contemporary urban square designs and utilisation. The tables of publications and translation works provide evidence of a dislocation between theory and practice and bring the causes to light. The discussion of this chapter outlines contemporary urban squares from the form to the essence in terms of urban square designs. However, as the objective urban squares serve is to provide for users, users' perceptions are significant and essential to guide the development of urban square construction in the future, and the survey of these will be explained in the next chapter.

Chapter 6 The criteria

6.0 Introduction

The analysis of case studies offers an understanding of contemporary urban square design and construction based on the attributes of urban squares. It highlights the issues which appear in the design and construction processes. However, "The human consequences of any environment are the measure of its quality, and not the form itself. But not the process itself, either." (Lynch 1981: 280). So, with respect to the human consequences of urban square construction in China, what criteria ought to be used for evaluating current development and for providing some guidance to further development? This chapter places an emphasis on exploring possible criteria relevant to issues of social progress and development.

In China, three criteria, ecological value, economic effectiveness and social effectiveness are used universally for public green spaces assessment (Yang 1995: 1). They are still the only administrative principles in use today to justify the dominance of green spaces in urban public open spaces. Section 5.2.1 introduces urban squares becoming new important components of public open space and the first part of section 5.5.1 implies the administrative principles for assessment has not been refined following such change. One of the causes of the problems in urban square construction – the pursuit of greenery ratios in urban square designs – indicates the influence of the ecological appeal criterion in urban square designs.

Concretely, the focus of the ecological value rests with the demand that open public space should play the role of protecting the necessary element of nature in human settlements, becoming the harbour for people to escape from stressful urban life and urban disease. However, since urban squares are hard-surface dominated spaces, the ecological criterion seems suitable for evaluating parks rather than urban squares. It might not be necessary to accentuate the surface of an urban square as hard or soft, so long as it is strong enough to support various activities and is easy to maintain. However, obviously hard surfaces are more suitable than soft materials for squares in most areas in the world as most countries are not as lucky as Britain which can employ both due to its wonderful climate (which provides conditions for grass growing). Function is decisively important in determining materials while furthermore, it is also decisively important in determining evaluative criteria.

Chapter 2 reviews the opinions of Heckscher and Carr et al. about the characteristics of 'better' urban squares. Heckscher (1977) lists them as the external relationship with its city and its spatial association with the urban area, its internal spatial character and utilisation. In their suggestions to designers and managers, Carr et al. (1992) focus the aim on to "serve the public good", arguing that public spaces should be "responsive, democratic and meaningful".

From the two sources above and according to the national condition and the development of urban public open spaces in China, three decisive factors emerge that should be expressed in urban squares: 'amenity, social issues and characteristics'. They are related to the sensation and utilisation of urban square, the effect on urban life and the role in the urban pattern.

- 'Amenity' – attractiveness, the degree to which an urban square is attractive for use by its people.
- 'Social issues' – usefulness, the degree to which an urban square is useful in fostering a healthy society.
- 'Characteristics' – image and immersion in local culture, the context that an urban square should enrich and the identity it enhances.

6.1 Amenity

The word 'amenity' mainly has two original meanings. The first one is that the features or facilities of a place make life there easy or pleasant. The second one is 'pleasantness' (1997: 42). 'Amenity' for an urban square means the level in both physical and psychological terms to which an urban square meets the desires of the people; in short how a place makes life easy and pleasant. According to "the primary needs that people seek to satisfy in public space are those for comfort, relaxation, active and passive engagement and discovery" (Carr *et al.* 1992: 19), a place of 'amenity' needs three things.

Firstly, a place of 'amenity' should be accessible and freely used. An urban square within the street network is convenient for people coming or passing through, and multi-entrances would be a basic condition for satisfying such expediency. An urban square is a place where people should be able to "act more freely than when under constraints of home or workplace" (Carr *et al.* 1992: 20). For example, it would not be easy to feel free when one visits a museum where everybody is required to keep quiet,

cannot smoke, cannot touch the exhibits, and is forbidden to take photographs for the primary purpose of protecting the exhibits. In an urban square, similar limitations would disturb pleasant moods as people come for leisure and freedom. People spend time in an urban square to do something or do nothing and standing or sitting somewhere as to their preference, though society has always had rules by which behaviour is limited to make it acceptable to everyone else, such as 'take good care of public property', 'keep a low voice to avoid disturbing others'; any extra rules which might contradict the fundamental function of an urban square such as 'keep off lawns', should be considered carefully before being adopted.

Secondly, a place of 'amenity' should be comfortable, understood as inviting people to spend time in an urban square. Human scale is the basic condition to offer a comfortable spatial relation. A human being staying in a large open area without enough companions may feel isolated and threatened.

An urban square of human scale could ensure the creation of three-dimensional space and a relatively open space. Such a space could provide favourable conditions for people, an easily communicated distance and an edge area with background. A relatively open space in an urban context which takes the sky as the ceiling may be perceived as comparatively larger than a similar indoor space or street space, although it is not endless.

Moving from a street to a plaza, the difference is in the moment that people feel a dramatic spatial change. The world becomes varied and interesting. An exaggerated size might make the change more obvious, but it would not provide more significance

in terms of the needs of daily life. In this connection, a large scale plaza is a waste of urban space because sustainable development should seek to reduce resource expenditure as well as recover the local ecology as much as possible. A measured degree of openness brings discovery and event to urban life but an exaggerated open space only brings difficulty for people walking through, the emptiness of the large open area and a loss of human context.

Human scale is the basic element to ensure a public open space is comfortable and meanwhile provides convenience for the creation of microclimates. Generally in a hot summer day, most people seek shade and in winter, most would seek shelter against cold wind, especially as the climate is not gentle in either summer or winter in most areas of China. As trees and greenery are "considered by most people to be aesthetically as well as psychologically important" (Kaplan & Kaplan, quoted by Carr *et al.* 1992: 11), their salience in terms of comfort should not be neglected.

Finally, appropriate amenities communicate an invitation to stay. An urban square is not a place only for appreciation, it is also for use in daily life. It could be an outdoor art show but it should provide the basic conditions for people to stay and communicate. Bookstalls, flower carts, snack booths and tea bars can all bring a lively atmosphere to an open space and provide more reasons for people to stay. Benches, steps, ledges and bollards offer diverse seating areas attracting different groups to rest or meet up; basically they enrich the flavour of human to the space. Temporary open-air markets should be encouraged, especially in those places that had a historical use as market places to keep the continuity of local life and meanwhile, to enrich the joys of life and functional significance.

6.2 Social issues

The social issue is that an urban square should be useful for setting up a healthy society. "In principle, it has been known for a long time that the environment has an influence on human behaviour" (Levy-Leboyer, 1982: 11). Heckscher & Robinson (1977: 4) state that, "What is expressed in open spaces is the essential quality of urban life – its casualness and variety, its ability to crystallize community feeling. People find in outdoor meeting places the chance to sense what is going on, to test the mood of the community, to mingle and communicate".

For today's Chinese society, what should the "community feeling" and the "mood of the community" be? This seems a complex topic, but at least one thing is clear, that the times are always developing and changing. The contemporary age is no longer to run according to the will of a certain emperor, and nor is it run for the pursuit of commercial value to the benefit of elite capitalists. This age could be symbolised by the desire to advocate peaceful coexistence between human beings and between nature and human beings. Therefore, contemporary Chinese society should work for the benefit of its people to foster a gentle, mild and peaceful state of mind with which to treat others, appreciate life, the world and other people. Such a state of mind gained from urban squares could be explained concretely as a kind of feeling of satisfaction with life and with the well-being of society. No matter how much time people spend in public space, they have equal right to enjoy the shared wealth of society. They should be free to go down there anytime if they wish to reduce the stress of life and

work and enjoy a sense of an active community spirit. Such psychological profit can be the foundation of a healthy society.

'The social issue' is a further demand in the premise that urban squares have had the quality of 'amenity'. It requires that urban squares have high quality to represent the sharing of wealth of society and express the positive spirit and peaceful mood which contemporary times is advocating. But a high quality does not depend merely on large scale construction, as this costs more money and uses more expensive materials. For example, the fact that evergreen lawns in large scale use up a great quantity of water resources is a weak point according to 'the social issue' as it has been discussed in section 5.3.5. China is a country with a dire lack of water resources and most Chinese cities have problems with water supply for living and industry. The annual amount of rainfall is on average less than the annual amount of evaporation and the capacity of lawns to conserve water is lower than that of woodland and in addition lawns need more water for maintenance.

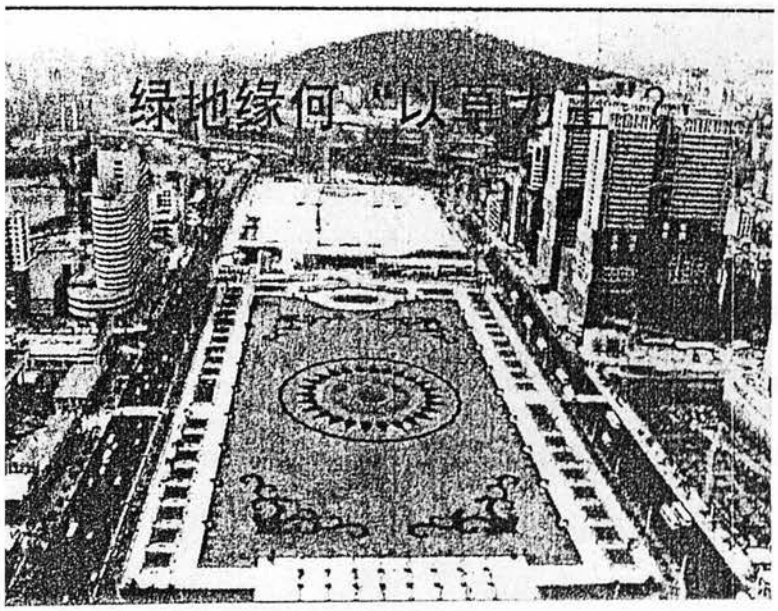


Figure 6.01 The Railway Square in Guangzhou
This urban square only can be appreciated from surrounding buildings.
(Source: Urban Plan 2000)

Though the survey held in Qingdao introduced in section 4.3 shows that citizens like and enjoy the changes brought by the introduction of evergreen lawns

(clean and green surroundings) and even that they would accept the shame of having to keep off them, this approach can not properly address 'the social issue' as such carelessness with natural resources violates the ideal of sustainable development and harmonious coexistence between human beings and nature. Additionally, Jing-yuan Jin (2000: 16) criticises Railway Station Square in Guangzhou as an embroidered carpet (figure 6.01) which does not serve the needs of ordinary people. People who are passing by cannot even see clearly the pattern. Only those standing inside tall buildings, especially the high-rise luxury hotel, can appreciate its beauty. Such a design cannot embody the idea of a democratic and open society.

It is not appropriate to use 'the social issues' to evaluate the construction of urban squares only from a single aspect but they must be situated in a social context; only in this way would it be possible to design public space not only for the present generation but also for future generations. In public space, people could learn to live together and forever.

6.3 Characteristics

The characteristic appeal of open public space is that it has some connection with local context, regional climate, landform and local custom, culture and history. It also could be called "local identity" with obvious discernibility and reference to local ownership. It emphasises the sense that "people make strong connections between the place, their personal lives, and the larger world, (it) relates to their physical and social context" (Carr & Co-author 1992: 20). People could recognise the place by its local distinctiveness and feel intimate with some events or memory connected with it. "The

sweet sense of home is strongest when home is not only familiar but distinctive as well" (Lynch: 1960: 5) The continuity of the memory of the city and the familiarity of people make the 'characteristics' the third criterion for evaluating public open space.

This criterion is especially important in contemporary times as at present, China is going through an unprecedented rate of urban development accompanied by an extraordinary openness to foreign culture and ideas. Transformations of old towns and developments of new towns make unavoidable choices of styles: between traditional and modern, native and foreign and regenerated and rebuilt. To a certain extent, the preference for foreign models, because they are considered new and modern, surpasses the care for the preservation of historical context and local distinctiveness. This is apparent from the consequences of urban development in recent years.

To enrich or create characteristics, the crux is the perception of characteristics. What is called 'characteristic' is a typical or distinctive feature or quality (1997: 245). Characteristics have their origin in comparison, either quantitative or qualitative. Things are only 'typical' or 'distinctive' in relation to other things.

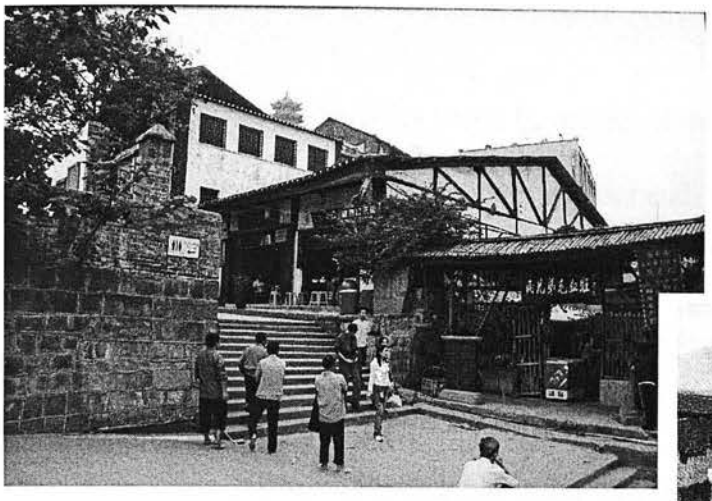
First, the 'characteristic' is not expressed by any single structure. A building or a sculpture could represent characteristics of a certain age or style, but it is only a landmark where it gathers with surroundings to jointly express a common theme. For example, a sculpture of classical style could appear in any place in the world might not easily be accepted as a part of the local identity except for example, in Italy where the functions of aesthetics, the relationship between buildings, the illustration of culture and history are all fully integrated in display. A sculpture is a design element,

a square is an urban spatial form, but they are each individual factors in an urban environment; the result of an intention to create characteristics relying on one design element or one single public space, undoubtedly is analogous to the relation between St Peter's Square or the Piazza di Spagna and the whole of Rome – they may be landmarks or symbols but are not characteristics of Rome as a whole.

Second, the distinguishing characteristic is not only limited to a certain place or a certain country, but may also come from elsewhere in the world. There is a phenomenon that something never before seen in Chinese cities is therefore new and could become a characteristic. For example, the design of Huiquan Square is based on such an idea. The glass tower and the cannon-like fountains were features different from the ones existing in Qingdao, even in China at that moment (the designer, 1992), but they were not new elsewhere in the world. They are rejected by citizens, as they are the products of imitation and, on the other hand, because they are 'nondescript and anonymous' without any connection to local culture. The establishment of the characteristics of a city is a process of constant complement and accumulation. New characteristics should not refute existing characteristics but become a part of them. Such a city would have a rich memory, and give its people a feeling of belonging.

Third, the characteristic does not necessarily rely on human creations, but could be fostered with regional facts of climate or geography, just as in China, almost every body knows that 'palm island' means Hainan, loess plateau means Shanxi. A further example, from Guang-bin Luo's description, is that you run along the streets, turn at the corners, step up or down, there is always white walls, grey tiles, uneven roofs following hills up or down (figure 6.02); no body doubts that this is the scenery of the

hill-city, Chongqing. The Campidoglio and the Piazza di Spagna in Rome obtain



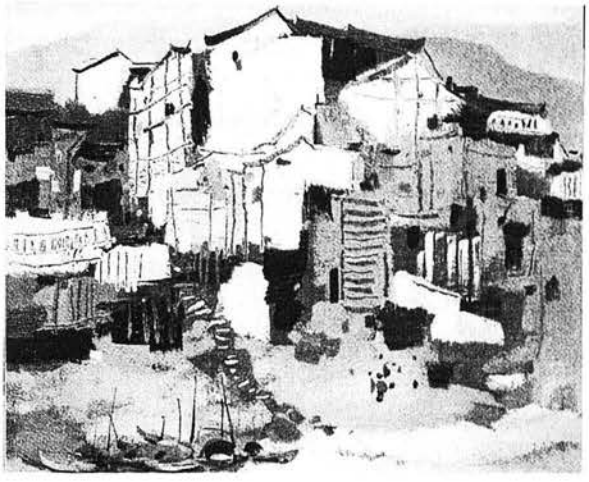


Figure 6.02 The characteristic of urban landscape of Chongqing is expressed by Guan-zhong Wu.
(Source: the Author 2002)

Figure 6.03 A plants design of plastic palm with, below alive palm trees. A typical scenery of southern China appear in an urban square of New developed district in Xian.
(Source: the Author 2002)

outstanding characteristics from the local landform. However, some northern cities use manmade palm trees to decorate urban scenery (figure 6.03), which does not really fit in.

The creation of characteristics should not be confined to human imagination; a more important and more powerful method is to learn from what God created and to take

inspiration from our predecessors' understanding to enrich and continue human culture in contemporary times.

Fourth, the characteristics might be mixed, or they might be pure in style, but the form of characteristics is a long process without end. It might turn into a dominant shape in a certain time but it is growing or transforming in tandem with the passage of time and the development of the economy and the enrichment of culture. Paris is famous for its rich characteristics, its present urban structure took shape during the age of Napoleon (1804-1814) but has been fostered and enriched in different times by different styles. An example of a pure characteristic, Siena in Italy, a town spreading from the core, Piazza il Campo, in a majestic Gothic ensemble, has gone through hundreds of years. It has kept and refined its characteristics and increased its value with the passage of time.

Both mixed and pure style characteristics are fostered through historical processes and enriched by time like wine mellowed by age. This indicates, on the one hand, that the creation of characteristics cannot be rash, on the other hand, to become a characteristic it needs to be examined by time.

Although the purpose of the research is to make recommendations regarding the creation of characteristics in urban square design in China, no a-priori definition is offered. The identification of characteristics must be on the basis of empirical comparisons – within Chinese history and across Chinese geography, but also in relation to a broader world geography and history. Without this broader comparative

scope, the range of possible characteristics will be narrower with those actually used becoming somewhat homogenous.

6.5 Conclusion

Without care for people's needs and serving people's daily lives, an urban square could not play the role in communities of bringing people together to prompt mutual understanding, to exercise their democratic right and to enjoy the improvement of their lives in both material and cultural terms. The analysis of criteria against a Chinese background helps to lift the evaluation from out of the design domain up to a social development level and the analyses separately focus on design, social and cultural effective may provide the base for improving and evaluating the development of urban squares. Moreover, it also indicates no single criteria are necessarily suitable to anytime and any domain and that there needs to be set up a new system of assessment in order to address the changes to public open space and avoid mistakes in future development.

Chapter 7 Conclusion

7.0 Introduction

In general terms, this thesis progresses from theory through to practice. Introductory Chapter 1 describes the research background, objectives, methods and structure. Chapter 2 focused on exploring the theoretical foundation of the urban square to provide a comprehensive understanding of it as a phenomenon. It begins by reviewing recent works and observations of Chinese researchers and scholars, reveals their perceptions of urban square construction which in summary is that these are dominated by large scale, formulaic patterns and, monotonous lawns, but lack local identity, misunderstand spatial form, copy western models and pursue visual enhancement. These ideas represent general and individual perceptions and meanwhile generate the objectives to which this research makes its contribution.

The second part of chapter 2 moves on to review the basic attributes and the evolution of urban squares and sets up a theoretical base for identifying the issues existing in contemporary urban square development. It sets out how an urban square is a place serving people's daily lives, a three-dimensional space of human scale within an urban context, differing from parks and has an unlimited role in social life. These basic attributes have been exemplified by the review of successful experiences of urban squares worldwide, which provide significant meaning to urban square constructions in the contemporary age. From here, the thesis focuses on urban square construction in modern China.

Based on the basic attributes of successful design, Chapter 3 analyses 20 cases from several viewpoints: location, context, design and utilisation. It exemplifies the application of design elements and uncovers the gaps in expressing the basic attributes and the methods employed to enhance visual effect, and the consequences thereof. The analysis of individual cases provides a fundamental and convincing basis for exploring the general issues of urban square design and construction.

Chapter 4 introduces two surveys: the perceptions of users of public open spaces and their satisfaction with evergreen lawns, to provide more informed and comprehensive support for analysing the characteristics of contemporary construction.

Chapter 5 offer an examination of case studies and from the general to the particular to address the research aims. It seeks to develop a more comprehensive view, deriving a basis on which to discriminate the strengths and weaknesses of contemporary design through looking at the shared and particular characteristics of urban squares, it explores the relationships between weaknesses, reveals underlying problems and goes on to distinguish the reasons behind the problem.

Chapter 6 moves from basing its view on the attributes of urban squares as the analysis focus in order to stress and reinterpret the criteria in a social background, promoting the evaluation of contemporary urban public space construction from design level up to social development level. It accentuates three decisive factors: amenity, social issues and characteristics to analyse the significance of urban public open space development in modern China.

This chapter starts with reference to the aims and perceptions of the citizens in relation to urban square construction, and general issues of urban square design, using these resources to identify the characteristics of contemporary urban square construction. Secondly, supported by the conclusion of the first part of this chapter and the strengths and weaknesses of urban square design, the chapter assesses the prevailing negative and positive aspects. It analyses the influences of urban square design on urban life and social development based on the three decisive factors to discriminate the positive and negative aspects. Finally, it targets the problems behind the issues in urban square design and utilisation, to provide related recommendations regarding policy, practice and further research.

7.1 The characteristic of contemporary urban square construction

Urban squares as external urban spatial forms that have been designed and built in contemporary Chinese cities demonstrate a conspicuous western 'flavour'. The perceptions of designers, managers and citizens also reflect the same matter. They use the words 'modern' and 'landscaped' most frequently when they talked about urban squares in interviews. The word 'modern' generally means the western style, while 'landscaped' squares differ from those purely functional squares, which focus on mass rallies or on gathering and dispersing. Such changes in form and function concretely reflect the western influence. However, whether or not the imitation of western design elements is dominant, the analysis of the practices in the previous chapters provides evidence for addressing the first hypothesis of this research, which is that imitation of western design elements characterise modern public space construction.

7.1.1 The construction of urban squares is to meet the need of people's lives

The improvement of the quality of life, the extension of leisure time and the change of living structure have prompted the demand for public spaces and the development of public life. On one hand, as people spend more and more time working indoors, they have a greater need to enjoy the sunshine and outdoor activities. On the another hand, as semi-public life has been reduced as mixed living conditions (shared enclosure yard, kitchen and toilet) were replaced by the living model of one-suite-one-family, people needed more spaces for convenient communication. Urban square construction projects have therefore been taken as prominent government projects and have become showcases of local authorities. This articulates the initial aim of urban square construction.

It could not be denied that contemporary urban square constructions display a tendency to seek grand and elegant effects, although, to a certain extent, this only expresses developers' or designers' understanding and even ignores the actual need of public life. Some Chinese scholars (Yu & Ji 2000) conclude that this phenomenon is the consequence of copying foreign spatial forms. Such conclusion is based on the fact that there exist exactly copied examples, but generally, the upsurge of urban squares is the response to the requirements of people's lives, not to lay western spatial forms down in Chinese cities. It is not the creation urban squares for their own sake but for their existing potential social utilisation. In fact, it is highly unlikely that any designers want to see that an urban square that they have designed and built is

unpopular or that an unpopular urban square could represent the beneficence of the local authority and prove their prowess in urban development.

Two reasons underlie the divergence in views of urban square construction. One is that developers and planners take their understanding of the appeal of large urban squares in a superficial way, to think that building urban squares larger and better would satisfy people in meeting their needs. However, citizens in Qingdao laid bare the truth with one penetrating remark (Chapter 3, May 4th Square). They thought that public spaces were small, not according to the physical sizes themselves but based on their awareness of the encroachment of private or semi-private use on once open spaces, in other words, if the areas, especially those sited in highly valued areas, such as the city centre or beautiful seashore left for public life, are reduced. This matter cannot be simply addressed by relying on urban square constructions as it is matter of urban land use and urban planning.

Additionally, fear of the comment of "nothing to see or nothing new" prompts designers and developers to concentrate on seeking visual effect to provide something new or striking to the eyes. Expansive vistas, fountains, sculptures and large scale lawns are dominant in urban squares design. However, fountains stay quiet most of the time and people are forbidden to walk on lawns. The issues of high maintenance fees, leave little space for those fountains and lawns to play the roles that they are supposed to. Practical considerations after designs have been implemented become dominant factors and, consequently, the disjunction between design intention and actual utilisation lends to the conclusion that modern urban squares copy western models. It is worth noting that the enjoyment and affection of citizens in their

utilisation and perception illustrate that fountains and lawns play a role in 'cheering up' the atmosphere and that increasing green areas reflect the desire for public spaces in Chinese cities.

The chapter proposes that the cause that underlies these disjointed understandings and results in the appearance of unpopular urban squares is the lack of a theoretical basis and analysis of the needs of public lives and the undue haste in the construction of urban squares. Such a resultant impracticality, to a certain extent, is embodied by the imitation of western design elements, such as the use of fountains and lawns in large scales. However, those western design elements have been absorbed and evolved by designers, although the results do not all meet the initial intentions.

7.1.2 Urban square designs have obvious Chinese particularities

It is not easy to give an example of a Chinese urban square that is very similar or associated with another one in another part of the world. The general findings of contemporary urban squares summarised in Chapter Four illustrate that western design elements have been employed in 'a Chinese way' and infused in 'a Chinese taste'.

The model of 'a line and three rings' (see figure 5.02) is the most typical evidence, being derived from a large number of examples. The result that such a model lays down, a big plane with a sunken area in the middle, little thematic integration with the surroundings and sections for inflexible uses, such as hard surfaces for walking on and lawns for appreciation only, are not common to public spaces in other countries

and regions. The causal link between large scale and grand effect, themselves not new ideas in the world, and the emergence of the three-rings model to display elegance and dramatic changes is unique to Chinese cities. It cannot be recognised in other examples, such as St Peter's Square in Rome and the Place Concord in Paris. It is not the author's intention to evaluate this model, but it is a Chinese style, an attempt to combine the Chinese context and create 'Chinese' urban squares.

Similar aspirations in providing a 'Chinese' flavour can be seen in sculpture and fountain designs, such as the Statue of Springs in Quancheng Square in Jinan (figure 3.14.3), which combines Chinese traditional calligraphy and art and the Lotus Fountain (figure 3.14.2) in the same urban square which employs a lotus feature, a favourite flower of the local flora. Such expressions of cultural context are emphasised in many urban squares, which the thesis discusses in the case studies. The application of these design elements is not therefore only because they are originally used in the west but because they are structures that could express culture and beautification, and improve the quality of life.

Therefore, to judge an urban square in terms of how much they copy or apply western design elements does not demonstrate whether that an urban square is accepted or not by users or praised by authorities. Its reception depends on whether western design elements have been transformed into features that evoke an idea of China and locality. The conclusion is that characterising contemporary urban squares design as 'copying western design elements' is not only unfair to Chinese modern urban square construction and is unfair to the development of urban squares in the world as well, but is also a distraction from more critical cultural issues.

7.1.3 Imitation is not universal

Some scholars believe that western models have been imitated in urban development, such as the application of space at a large scale that sweeps away the memory of the area, and has been pointed to as repeating the trace of the beautification movement a hundred years ago in the United State (Yu & Ji 2000). Their comments are not unreasonable.

Huiquan Square in Qingdao is a typical example. The design completely ignores the urban context and the original use, imposes an urban square, a certain spatial form, on the place, decorated with a special structure, large fountain sets and hard surfaces. It uses monumental meanings and imitated features to upgrade the quality of the area and make it more significant and elegant. But it achieves this by expelling the original users and being abandoned by locals. The design, in form and composition, is an outcome of copying western design elements and models. Moreover, its lawns have become exhibits, forbidden areas in public spaces that levy a heavy maintenance burden.

However, such a design is rare in urban square developments, as demonstrated in the case studies and surveys. Generally, western design elements have been combined with a Chinese cultural approach and used for the sake of Chinese urban square. Imitation of western design elements is a part of the phenomenon, not a dominant issue. The reasons could be synthesised from analysis of the aim and the result of urban square developments.

7.1.4 Summary

The problems existing in urban square designs generally are the consequences of inappropriate application rather than imitation of western design elements which is the recognition only based on a partial understanding of contemporary construction. A comprehensive recognition is helpful to find the way to improve urban squares in the future.

7.2 Positive and negative aspects of application of western design elements exist at the same time

In this section, 'positive aspects' are those factors that promote the goal of urban square constructions as places that serve the people and improve urban life. 'Negative aspects' are those factors that prevent the process to these goals.

If there were only negative aspects, it follows that there would be no instances of people enjoying their life in urban squares and there would be no innate drive to continue the development of this new type of public space. There is something missing in the existing discourse on research into urban squares in China.

Popular and unpopular urban squares exist at the same time, and offer a positive social effect. As section 6.1 argues, the application of western design elements has resulted in changes to the urban structure, and added urban squares as new components to urban design. Those have become places where visitors can experience local life as

they are where citizens hold celebrations, join in local events, walk around and communicate with others. These new components bring a new vitality to the urban landscape and urban life, transforming their environments to more open and more lively cities.

The reasons that might cause those urban squares to become unpopular, such as large scale, the lack of spatial enclosure, formulaic pattern, forbidden lawns, insufficient shady trees and the loss of local identities, as Chinese scholars (Section 2.1) have pointed out, all relate to the issues of design and the application of certain design elements, criticisms for which supportive evidence can be found in the case studies, but not the spatial form itself. Therefore, if the application of western design is assessed from the social development angle, positive aspects are dominant, but in the design process of individual projects, the negative aspects alienate an urban square from its role in the urban landscape and urban life. Or rather, the construction of public open space has made progress in terms of amounts and variety of spatial form but the quality of each urban square should be improved according to the basic attributes of urban squares and the needs of public lives. The concrete positive and negative aspects are discussed in more detail in the following section.

7.3 The positive and negative aspects

The positive and negative aspects analysed here are based on strengths summarised in subsection 5.1.2: new urban patterns and new urban life; new landmarks and varying public art, and increased quality and quantity of seating areas; and weaknesses summarised in subsection 5.1.3: the disregarding of three-dimensional space; the

stereotyped form; the inappropriate use of elements; undue application of evergreen lawns, and the insufficiency of serving daily life. The difference is that they are identified according to the three criteria of amenity, social issues and local identities, which means that they are identified from a social background as well as from the scope of design. They might universally apply, or might only emerge in individual cases. The significance of recognising them is to clarify what is positive to realise the social role of urban square construction, and should be continued, and what is negative and should be adjusted and avoided in further practice.

7.3.1 The positive aspects

- Amenity

Compared with previous urban squares, whether thematic sites, dispersing and assembly hubs or leisure spaces, all squares in the case studies have had facilities added to invite people to stay for appreciation or relaxation. The installation of fountains, sculptures, and seating equipment provides such opportunities.

Fountains carry natural factors into the manmade environment and bring kinetic features that enliven the atmosphere and bring pleasure to people. Although most of them only show their vitality at certain times and seasons, and are out of operation for much of the year, these are not the problems of fountains, they are the problems of inappropriate designs. Generally, a fountain is a positive design element in urban square design but the way of design needs to suit the local conditions.

Sculptures as the main body of public art become new street features, enhancing the artistic atmosphere. Some of them have become landmarks, helping residents to orientate themselves in outdoor spaces. Some of them have become new symbols of the cities, infusing and enriching local culture. Some of them attract people for their liveliness and interest. If the form and quality of sculpture is suitable to a certain site, then it is more likely to function as a positive element for creating a high quality and culturally integrated urban environment.

Whyte (1974: 30) states that "the simplest of amenities, a place to sit, is far and away the most important element in plaza use". He concludes his observations that "people sit most where there are places to sit". Increased in numbers and types, seating areas play the role of the most basic and essential facilities for inviting people to stay and discover the interesting things and social life in an urban square. Although there is a problem of the lack of diversity of seats in same parts of urban square, the supply of seats means urban squares have taken a step towards convenient and comfortable use.

- Social issues

In contemporary society people often spend less time doing things in cooperation with others. They can work at home, watch films privately and drive their own car to travel. Their lives are distributed through more and more private contexts, providing new spatial forms. The need to attract people to gather together to set up mutual communication and understanding is more important to maintain a healthy society, as an ancient Chinese proverb asserts, "people are scared of the things they do not know". The development of urban squares has provided places for public

communication and activities in a direct way, and provided the chances to keep the connection between people and to reach equity between people.

Urban squares give people places to enjoy the developments and the changes of their cities and their life, to do the things they want to do. As the surveys in Qingdao reveal, when people want to celebrate something, they go to May 4th Square, even without prior arrangements. This is because it is a place where they can express their feelings and enjoy their rights as participant citizens of the city. Moreover, most urban squares are located in city centres or densely populated areas, and are therefore convenient for people to go to attend public life and make of it a part of their daily life. Urban square life today has become an integral part of people's daily lives; this is the character a democratic society should have and offer.

These positive aspects have a deep significance in urban development. China is a country with a 1.3 billion people, which is a quarter of the world population. Its urban population increased from 0.209 billion up to 0.3046 billion, urban areas increased from 448,000 km² to 1,043,000 km² between 1984 to 1994. The average farmland of the country was only 28.8 percent of that of the world and the average of forestland of the country was less than 50 percent of that of the world in 1994, and the growing urban population, the expanding of urban areas and the decreasing of farmland and forestland is continuing (Li 1999: 49, 51). At present, policies for improving the quality of life emphasise encouraging private property, such as the enlargement of the average accommodation area, private cars and private gardens. Such execution requires recognition that social wealth is extremely resource-intensive and will lead to the massive depletion of natural resource.

It is not possible to provide the same high quality of private life to everyone, both related to the distribution of social wealth, to the sustainable utilisation of natural resources and the sustainable development of human society. But it is possible to provide a high quality of public life to everyone. The better way to improve people's lives is thus not to focus on private amenities but to refine public life. Attendant upon the accumulation of public life quality and increasing its role in people's lives, the disparity of private life is relatively reduced. Urban squares can be, and are playing such a role.

This significance is another positive factor of the construction of urban squares. As being demonstrated by the people's affection for new urban spatial form, it is more profound and lasting than other issues of urban square construction to social development as it is the premise of other positive aspects, especially in the condition of China, and offers one approach to address negative aspects. It is also an important indication to urban developers in China as to how they might create a high quality of Chinese life.

- Local identity

That public art plays an important role in landscape enhancement and beautifying people's lives is the main point of positive aspects in cultural evolution. For this research, the significance is understood that art can serve people and be close to their daily life rather than valued in a purely artistic sense.

The appearance of new urban squares which aim to serve daily leisure use drives urban public open space towards expressing pluralistic forms, connected with people's lives. It requires urban life to no longer be structured by separated segments but become an organically coherent whole. Meanwhile, the role urban squares have started to play in urban landscape provides opportunities for unifying urban landscape and function and stimulates the urban environment to be constructed as a whole. However, the appearance of urban landscape seems to receive more attention than daily use, resulting in over-pursuing image enhancement and ignoring the public needs. This issue is pertaining to the understanding of the aim of urban development, it is for appreciation or utilisation.

7.3.2 The negative aspects

- Amenity

Throughout the case studies, this research noted those phenomena in urban square designs criticised by many Chinese scholars (section 2.1), such as large scale, lack of spatial enclosure, formulised pattern and monotonous lawns. These issues make some urban squares lose their affinity to their users and surroundings. The distances between people that are the consequence of large areas are not helpful in stimulating their passive communication. Flat and hard surfaces do not invite people and featureless lawns prohibit people. Lacking a sense of spatial enclosure, people cannot find the edge area where they feel comfortable to stay, and without building shadow and the shade of trees, people are not sheltered from strong winds and burning sunshine. These non-people-friendly issues give people the experience that urban

squares are not amenities. However, these negative aspects exist through a relationship of interaction and of mutual cause and effect.

This research distinguishes the causality between these negative phenomena, accentuating large scale, which favours monumental expression but not human scale that is an essential issue in urban square design. Stripped of the superficial differences, the shape of the site, the pattern of flowers, the size and colour of sculptures and fountains in daytime and at night, the model of 'one line across three rings' is the product of the idea 'larger is better'. The methods used for creating large scale, reduces the amenity of those urban squares. The site is instead considered as an isolated island separated from its surroundings, inconvenient to access. Lawns enclose hard paving in the middle, limiting the space for activities, driving people away from the edge and making people uncomfortable as they become the focuses of others.

- Social issues

Previous research (section 2.1) notices that large lawn-areas are featureless as they prohibit people walking through or staying on them, but did not point out the fact that because more than half of public space is inaccessible to the public, the space becomes no longer public for the reasons of maintenance and beautification. If the fact is that urban squares cannot be completely used by the public how can these places be crowned public spaces!

Fountain design has a similar negative effect. Fountains on a large scale certainly are more impressive and enliven the atmosphere powerfully but most of the year they are just large pools or basins out of operation for the reason of high maintenance cost and

protection from freezing. Such extravagant and unrealistic phenomena are not only unable to attract and please users and but are contradictory of the principles of developing civil society, preserving ecological balance, making effective utilisation of natural resources and fostering sustainable development.

Additionally, forbidden evergreen lawns, as the previous section states, lead to a lack of amenity and invitation. Large areas without people, lying typically in front of the city hall, extends the psychological distance between the government and people, and is unfavourable to express the essences of equality and democracy of the urban square

- Local identity

The characteristics the designers intended to create are based on the unsystematic analysis of local identity. Section 5.4.3 accentuates that a characteristic is a result of comparison and the result will be different dependent on the background chosen to compare it with. However, the different forms of design elements have been considered separately by designers rather than the coherence of culture and connection with the context. This creation of characteristics resulted in disharmony and meaninglessness.

If the urban square has not been considered as a whole and as a part of city but as an isolated island, without connection with surroundings, the site can be not considered as an urban square. Therefore, the consideration of identity cannot be said to exist in the urban square as a whole. The fact that a single design element carries the urban square's identity is obviously weaker than an approach in which the urban square as a

whole creates identity. It is easy to end up following the stereotyped formulism as the thesis analyses in section 5.1.5.

Vegetation should be employed to reflect the regional climate, landform to reflect the particularities of regional geography. These natural attributes of a region are not considered as factors to create characteristics, making the urban squares lose their regional identity. The universal phenomenon in urban squares of large areas without shady trees supports this negative aspect, as well representing the lack of care for daily use. Pursuing open and void effects without combination with the condition of climate and landform, many urban squares have followed the model of 'a line across three rings', losing their local basic identity.

The lack of local identity is a critical focus among the comments of Chinese scholars (section 2.1). According to the analysis of the case studies, the lack of local identity does not reflect a lack of a process of creating characteristics; quite the contrary, there is a great deal of consideration paid to symbolising meaning, but the inappropriate understanding of the basic attributes of urban squares and the design relying on human imagination makes the results fail to reach the intended goal.

7.3.3 Summary

The application of western design elements characterises contemporary urban public open space construction, brings out new features and vitality in the urban landscape, provides opportunities for public communication and public activities and makes a

starting step towards varied urban life. These are decisive progresses in urban development.

Although adding facilities in thematic sites and assembly and dispersing hubs makes an improvement to those urban squares in relation to inviting people, the amenity of leisure spaces has been reduced by over-emphasis on pursuing large scale and monumental expression. Social use has been limited by inappropriate use of lawns and fountains. Local context has been ignored in urban square design and, consequently, the characterisation of urban squares is unsuccessful.

The consideration of pragmatic solutions should be enhanced and sustainable development principles should be considered in urban public open space designs in order to avoid unnecessary waste of natural resources and to improve urban development and urban life for present and future generations.

7.4 The recommendations

This final part of this research is based on the attributes of urban squares and combined with the analysis of the problems, the positive and negative aspects in urban squares, provides recommendations from three viewpoints: principles and strategies, design and research.

7.4.1 Principles and strategies

Pursuing a large scale has several causes and one of them is the requirement for a minimum greenery ratio, which is an official standard in assessment of public open space. It also indicates that there is insufficient attention placed on the differences between parks and urban squares. The negative result of urban squares at a large scale and the basic attribute, that urban squares need to be dominated by hard surfaces, demand a new standard of assessment to meet the evolution of urban public open space. Establishing such a new standard will be helpful to encourage the two types of public open spaces, parks and urban squares, to play their role in urban development and urban life.

Parks and urban squares, although both are public open spaces seeking to serve people's lives, have fundamentally different functions. As the lungs of the city and to counter local pollution, loss of wildlife habitat and the threat of global warming (Schroeder, quoted in Carr *et al.* 1992 11-12), parks offer ecological benefit and urban squares offer communication. The greenery used in urban squares is thus basically for people to relax and use the spaces. If greenery becomes the barrier to people's activities such as walking around, passing through and joining in with daily events, it conflicts with the fundamental function of urban squares. Therefore, greenery is not a suitable objective of urban squares but it could be one of the design elements used in creating comfortable environment.

At present, there is a large amount of urban squares in China but generally, most cities have only one or two; the construction of urban squares is still in its infant stage. To resolve the problems of poor urban square design, it is important to enhance theoretic research to provide theoretic support to further development and, meanwhile, a series

of norms for guiding urban square design and construction is necessary to ensure the construction of urban public space as a whole follows good practice.

A hierarchy in the classification of urban squares should structure the series of norms. It would be useful in delimiting the scale and functions of a new urban square. The lack of the guide of a hierarchy system has resulted in developers and designers only relying on their own understanding of scale and functions and thereby caused functional confusions between different types of urban squares.

Table 7.01 shows the related factors in a hierarchical classification. Despite the limitations of factors which may be unmodifiable, such as geography, certain existing builds and structures, there are two factors should be considered in defining the scale of an urban square. One is the amount of potential users and the amount of users anticipated in the design; the other is the square's position in social life, or its social role.

For examples, St. Peter's Square in Rome is a religious shrine and the assembly place for Christians all over the world, therefore, its range of users is not limited to Rome, or even to Italy and the symbolic meaning make its grand scale reasonable. Tiananmen Square in Beijing is the largest in China and, has special position in people's hearts. The symbolic meaning it contains is not only national history and culture and freedom and liberation. The spirit it represents is an intangible force which encourages every Chinese person. Tiananmen Square is the place belongs to every Chinese. The special significance allows it to display a special scale. With regard to other city squares, district squares and neighbourhood plazas, the range of

regular users is likely to be progressively fewer; as the position in social life more towards daily local needs, a lively and intimate atmosphere become dominant. This table may make appropriate orientation of a new urban square easily in terms of scale role, and design elements.

The table is simply an outline framework for developing planning and design norms and that detailed guidelines could be developed for each category, drawing on the lessons of the research in the thesis. This design guidance would need to take into account regional climate, local or regional construction and plant materials and design traditions, etc., and therefore would need to be much more specific to each geographic region of China, but could be a valuable next step to build on the research.

Table 7.01 A hierarchical classification of urban squares

			Major square	District square	Neighbourhood square	Additional explanations
Thematic square	Major Function		Activities at city level	Activities at district level		Small in number is better.
	Design elements	Hard-paving	dominant	dominant		
		Plant & lawns	beautification	Beautification; Trees for spatial division; Shade		
		Sculpture or structure	Spatial organisation; Memorisation	Spatial organisation; Memorisation		
		fountain	grandeur	Human scale		
	Scale		Large	Modest		
	Style		Grand	Lively		
	Role		Symbolic	Landmark		
Assembly and dispersal square	Major Function		Assembling & dispersing passengers	Assembling & dispersing passengers		
	Design element	Hard-paving	dominant	dominant		
		Plant & lawns	Beautification; Trees for shade	Beautification; Trees for shade		
		Sculpture or structure	Spatial organisation; Memorisation	Spatial organisation; Memorisation		
		fountain	grandeur	Hunan scale		
	Scale		Large	Modest		
	Style		Grand	Intimate		
	Role		Symbolic	Landmark		

Leisure spaces	Major Function				Small group activities	Large in number is better.
	Design elements	Hard-paving			Dominant	
		Plant & lawns			For making comfortable and beautiful; Trees for spatial division; Shade	
		Sculpture or structure			Beautification	
		fountain			Enliven atmosphere; Adjust microclimate	
	Scale				Modest only	
	Style				Lively & intimate	
	Role				Neighbourhood Landmark	

7.4.2 Design

Section 5.1.4, in analysing the causes of weaknesses of design, establishes that large scale is the key issue. It starts a chain reaction of unenclosed, exposed space, the disappearance of the third dimension, breaking the connection with surroundings and the use of a stereotyped model. No one model could suit all the needs of urban square designs; similarly no one concrete method could solve all the issues of urban squares. Generally, however, in those urban squares that are already constructed at a large scale, spatial separation could be a first strategy, to break up the space and reduce the monumental scale to the human scale.

For example, in the Cultural Square in Changchun, on the premise of keeping existing patterns, we could create an 80 metres wide and 350 metre long tree-corridor along the main axis, narrowing the void space into a distance inviting people to see events, making the sculptures stand out in the middle and the grand building at the end and

intensifying the vision on the main axis. The tree-corridor would separate the plaza into three parallel parts along the main axis and the sub-axis connecting both sides would further divide the site into four parts (figure 7.01). These sub-divided spaces could then be used for different purposes and would be designed in different styles. Such changes would not only bring out the spatial proportions, but they would also give users clear reasons to visit the square.

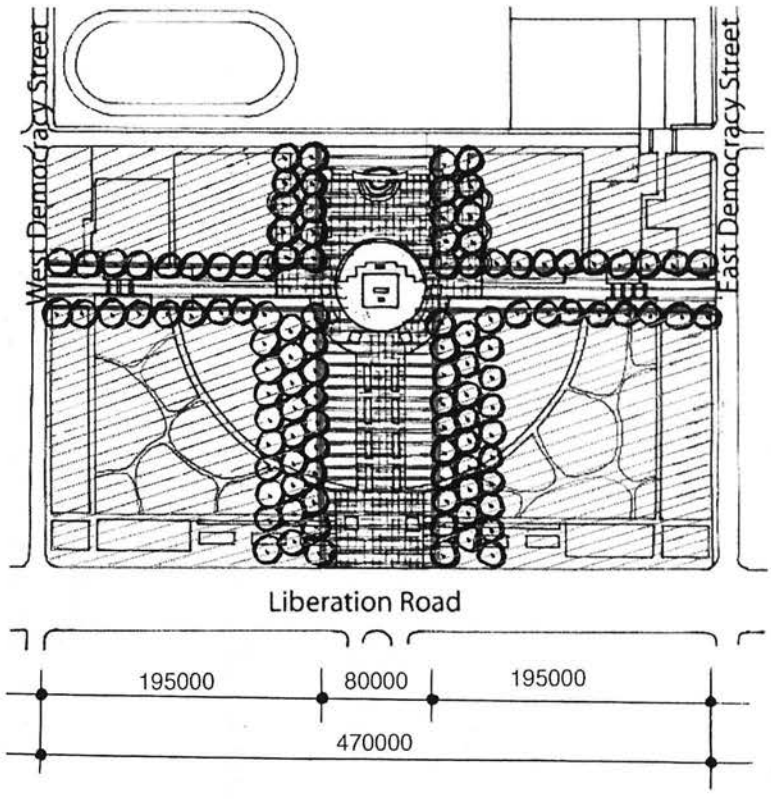


Figure 7.01 A suggestion for re-dividing the space of Changchun Cultural Square (Source: the author 2003)

This spatial separation mainly employs trees as the design element. Buildings or structures are also practical but need more care. Gare Part-Dieu Square in Lyon (figure 7.02) has made such attempt. The original plaza was a semi-enclosed space. The one building on the southern side was added two years ago, to separate the plaza from a busy traffic road and to give enclosure to the space. The discussion for this final decision took half a year, the assessment of the new building has been viewed from many aspects, architecture, urban design, utilisation and commercial value and related professionals, managers, citizens and officers participated in the discussions

(introduced by Mr Boulens, the director of Green Space in Lyon, 2003). Such an experiment can be a reference for China, especially in the process of decision-making. Similar actions should be established on comprehensive comparison and deliberation according to the concrete situation of each urban square.

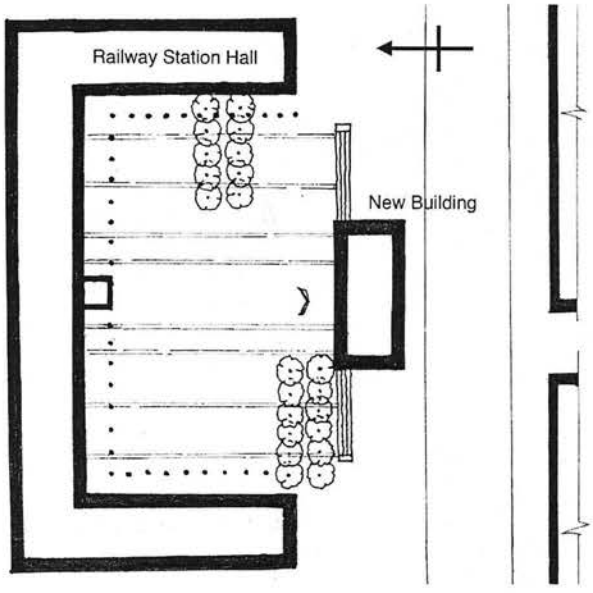


Figure 7.02 Gare Part-Dieu Square, Lyon
The sketch of Gare Part-Dieu Square shows a new building was added on the open side along the main street, giving spatial enclosure to this original semi-enclosed space.
(Source: the author September2003)

Surrounding buildings are involved, not only in enhancing spatial enclosure and three-dimensional sense, but also in healing urban squares from the situation of being isolated islands. For instance, at Beibuwan Square in Beihai, if Guangchang Dong Road could be transferred into a pedestrian street or a daytime-traffic-free street and

then, the connection between the plaza and surrounding shops and restaurants would be established (figure 7.03). In this way, the nuisance of traffic and the division from

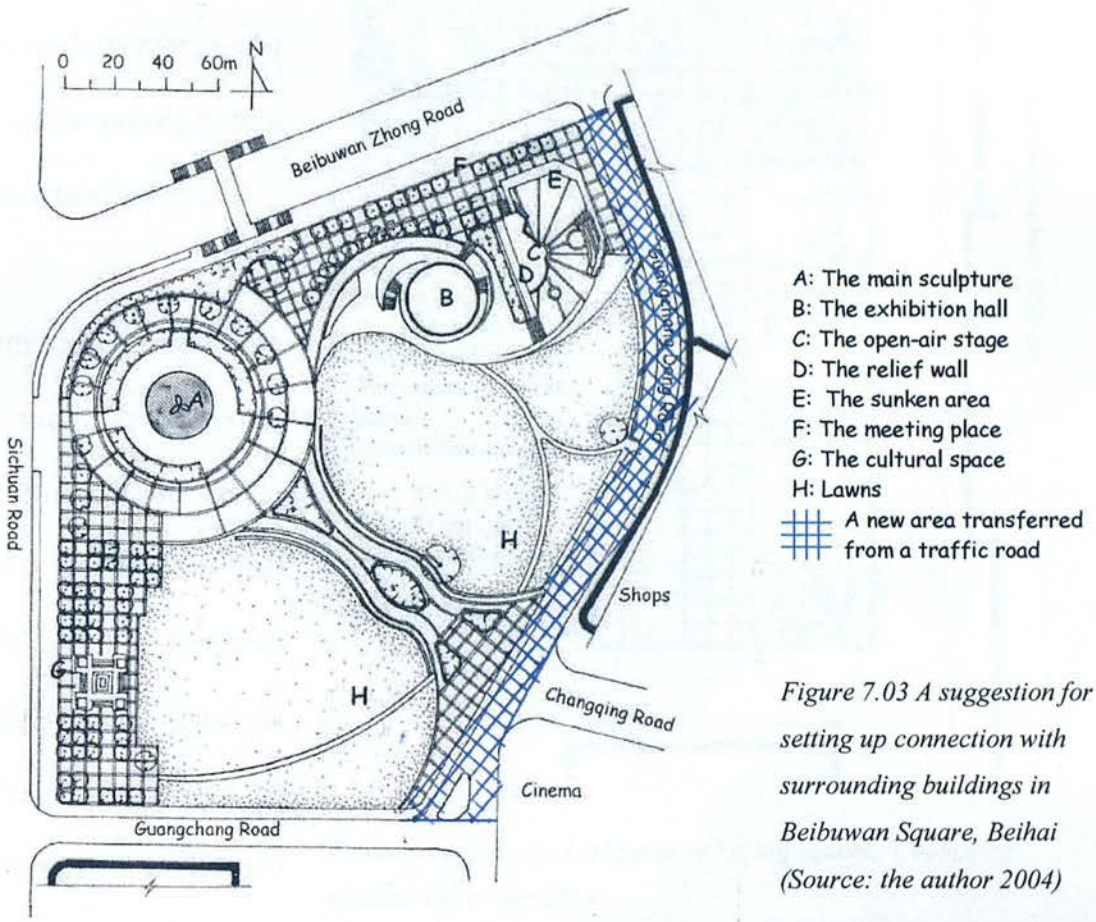


Figure 7.03 A suggestion for setting up connection with surrounding buildings in Beibuwan Square, Beihai (Source: the author 2004)

surroundings could be eliminated and people could freely move back and forth between the plaza and shops, coffee or food services could be arranged along the street and people could sit at outdoor tables enjoying fresh air and watching the world go by. The plaza would have regular users increased in number and the connection between the plaza and surroundings would be set up in physical way.

To break the model of one ring across three rings, there are good ideas that can be borrowed from some squares which have been analysed in the case studies. Luying Square in Chongqing has originality in spatial subdivision (figure 7.04). Trees and hedges compose a series of subdivided spaces, open, semi-open and enclosed. These

'green boxes' enliven the original monotonous plane and add more edge areas and, thereby, make it easy for people to find a place to stand or sit.

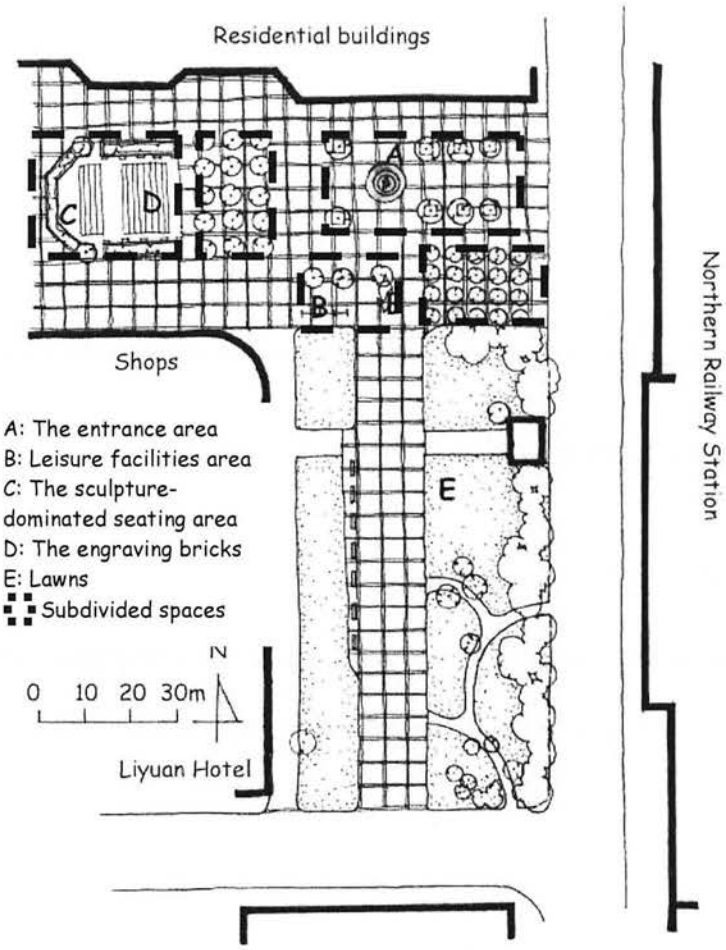


Figure 7.04 Sub-divided Spaces of Luying Square, Chongqing (Source: the author 2004)

Plants and hedges are not the only materials and methods to create spatial subdivision and enclosure. The design of Xidan Cultural Square in Beijing has provided an experience in a different way. A rising landform has been used to offer self-space and to prevent the influence of a bus terminal at its northeast corner. This arrangement is considerable but only solves one issue and, unfortunately engenders another problem. It cuts off the relationship between the square and the restaurants and coffee shops behind which loses the potential to bring lively factors into the square. Figure 7.05 may illustrate a more comprehensive idea in dealing with such surrounding factors.

Figure 7.05 is an elevation sketch of the northern edge of Xidan Cultural Square. It suggests that the rising landform area should be reduced and sited only in the

northeast part. A new platform made of light material, instead of the existing granite one, could be used to expose the building which is hidden by the granite structure, and the outdoor coffee and eating area could be arranged in the northwest part of the square. The intimate connection between cafés and restaurants and the square would be set up thereby.

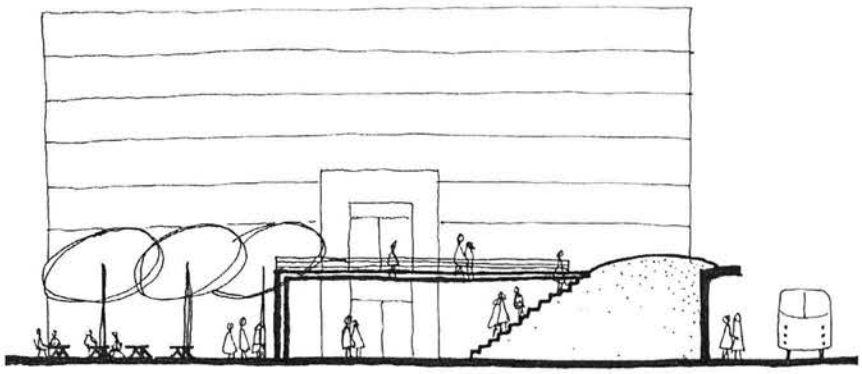


Figure 7.05 An elevation sketch of northern edge of Xidan Cultural Square, Beijing
(Source: the author 2004)

Because large fountains are out of operation most of the year, this research suggests that fountains at a small scale should be used more in number than large water features. Fountains bring out nature and vitality into manmade space but they require the quality of flowing. Without running, water, they are just a set of sculptures, a mass of pipes or ponds, that do not play the role of cheering up the atmosphere by their noise and lively activity. The design of fountains should be based on the principle of keeping their vitality and meanwhile accommodate local conditions in terms of finance and climate to create economic and effective water features. As most Chinese cities lack abundant water resources, fountains at a small scale should be the norm, the larger scale ones should be rarer. Protecting and preserving nature should be expressed in every detail in urban development and urban life.

The use of lawns, as discussed in section 5.3.5, is not suitable at a large scale for the conditions of China in terms of climate, maintenance and utilisation. Many Chinese scholars (Liu 2001 & Su 2001) advocate the replacing of lawns by trees. This is an effective method for current conditions, in bringing public space back to use and enhancing spatial enclosure and ecological benefit. Certainly, this recommendation does not mean to forbid the use of lawn, it is merely an attempt to find an appropriate use of lawns. Only when the environment has been improved as a whole in terms of ecological balance and there are more species of grass which have proved strong enough for frequent use, then the use of lawns may be more liberally than today.

The creation of local identity is a focus about which designers, scholars and authorities all care. Research into the history, culture and all factors acting on social development and urban life are important for creating local identity. The observation of the utilisation after design processes is another way to obtain guidance in the provision of local identity. Figure 7.06 shows the scenery in a normal morning in Drum Building Square in Nanjing, with some citizens gathered exercising Chinese calligraphy. They dipped their brushes in water not ink, and used unusual big brushes made by themselves to write on their 'paper', the hard paving. The people (interviewed by the author in October 2002) remarked that this is a regular activity, which attracts many calligraphy fans and watchers. These calligraphy fans not only discover a new useful meaning for hard paving, they are creating local identity. Such activities could only take place in the country which has such special art aspect of her culture and could only take place among those people who have a deep love of their culture. Their love and actions enhance the feature and characterise the city they are

living in. They bring vitality and distinctiveness to the place. They are the 'sculptures' for creating local identity.

Figure 7.06 A fan is exercising Chinese calligraphy on the hard surface, Drum Building Square, Nanjing.
(Source: the author October 2002)

That their activities attract many watchers indicates another important principle that this research accentuates, which in the use of people as a design element. Public space is for public life. People are the main body of public life, what they do affects others' choices. People attract people, they invite events to take place, make a place more comfortable to stay in and fill it with more people. That there are more people means there is something interesting or enjoyable. If people are considered as design element, the design may be less meaningful to things that matter to a designers' perception but will express the needs of those whom public space serves.

7.4.3 Research

Care and consideration in the design process make all the difference and constant care and consideration make all the difference fresh and continuing. Public open space design is an endless project as the needs of people are always changing. Tracing the utilisation of public spaces and exploring the needs and changes of people are the ways to keep the discourse and development of public space alive and refreshed.

Research on the utilisation of public space is urgently needed for the improvement of modern urban public open space. It should attempt to explore "how they [outdoor spaces] are used, what seems to work and, which elements are often overlooked. This kind of research is known as Post-Occupancy Evaluation (POE), a systematic evaluation of a designed and occupied setting from the perspective of those who use it" (Marcus & Francis 1998: 345). Marcus and Francis also provide four situations in which undertaking this kind of research can be very informative and useful, repeated here for researchers who aim to take action in POE research in China.

- In an educational setting, where students of landscape architecture, architecture, or urban design can both learn a method of research and gain a much deeper understanding of how people and places interact. This perspective can enrich their design skills and ensure that decisions at the drawing board are backed up by an understanding of how comparable places actually work.
- In a professional setting, where the job at hand is to redesign, say, an existing park, playground, or open space that apparently is not in keeping with today's needs. A systematic research is needed on how the space functions, which in

turn will enrich participatory design workshops and the eventual design program.

- In a professional setting, where the task is to design a new urban plaza, park, campus courtyard, etc. A systematic evaluation of comparable spaces in the same cultural setting and climatic zone can provide essential information that will enrich and verify the proposed design program.
- As staff development in a professional setting during down-time between projects (Marcus & Francis 1998: 345).

Another important research at present is an exploration of local identity. The recognition of existing local identity is the fundamental basis for contemporary action in creating characteristics but what the local identity of each Chinese city or region are in terms of historical meaning or habit or urban landscape or living-style and how to develop are all open questions.

These two researches are urgently needed not only in public open space construction. They are significant to every aspects of urban and even social development. Because they make a contribution for understanding what people want and what context has been inherited and what creations could be made at present and in the further.

7.5 Limitations

This research concentrates on the application of western design elements in urban square designs and evaluates modern public space open development only for the construction of urban squares. Although urban squares are new spatial forms that have

attained emphasis in recent years and the application of western design elements characterises the practice in urban square construction, the research still only address part of the issues of contemporary public space development in general.

China is a huge country, each province, even each region, exerts differences in terms of economic development, historical background, climate and geography. Particular evaluation and recommendation focusing on different regional context is needed to evolve the discourse to a more practical stage that includes the analyses of local identity, behaviour, preferences, the utilisation of local public space and the distribution of parks and urban squares in individual city. This would in turn, be helpful to balance these two types public open space to attain high level of social issues and ecological benefits.

The research does not only refer to cultural factors and also does not refer to civic events. When Halprin (1972: 28) accesses major plazas in different cities, he accentuates that "the greatest major plazas in the world become civic symbols, not only because of their beauty of design, but because of the variegated and important civic events which take place in them". Although some of case studies mention organised or spontaneous activities, there is no systematic suggestion about activities creation. In fact, creative activities can be the aim, and "the physical elements are the tools" (Halprin 1972: 7).

Additionally, this research does not involve the relationship of the ancient urban space and new urban space in terms of form and utilisation. The change of modern life cannot cut off the coherence of life from ancient time. The exploration of what has

been preserved and survived naturally, and of what has been missed, can be significant in providing information from every angle of life, not only confined to the use of public space. This needs to be highlighted in the Chinese background.

7.6 Conclusion

Nothing is perfect in its initial stages. Everything exists in flux, is always developing and changing. The truth that there is something positive and something negative in every thing is a natural law. The important thing is to learn from the past and to evolve in the future, which is the goal that this research attempts to approach.

The construction of urban squares can make a positive contribution to the design of public open spaces, enlivening the structure of the overall urban pattern, providing mere places for people's daily leisure and communication and thereby helping to improve the quality of social life and economic development. However, in order for this hope to be realised, there are many practical improvements to be made in terms of how we approach the design of urban squares. Such improvements would include, though are not limited to, shifting the scale of design from the monumental to the human and setting up new standards of design evaluation informed by environment-behaviour research and comparative studies of local identities.

The creation of public space is an endless project. It should constantly parallel the changes of people's needs and the changes of related factors, to keep a high level of understanding and a high quality of response. It is not easy to provide same conditions for everyone but it is possible to provide a high quality of public life for city dwellers.

This is the responsibility of to those persons who take action in public open space construction and social development.

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